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CLIMBING IN THE DOLOMITES.





Antolne, Corolla, and Polme.









olomites

LEONE SINIGAGLIA

With Introduction by EDMUND J. GARWOOD, MEMBER OF THE ALPINE CLUB Soc. Club Alp. Ital.

Translated by MARY ALICE VIALLS

With Illustrations and Map

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TRANSLATOR'S NOTE.

THE translator begs leave to offer her grateful acknowledgments to the author for his help so generously afforded during the progress of the work, especially for his recent revision of the text and sundry additions which bring it down to the present time.

She also wishes to express her thanks to the members of the Turin branch of the Italian Alpine Club for their kind permission to introduce the book to English readers, and to recognise the courtesy of the photographic artists who have contributed to the Illustrations.

M. A. V.



INTRODUCTION.

AT the time of my first visit to the Dolomites, seventeen years ago, the list of peaks of which the ascent had been authentically recorded was not an extensive one, and comprised for the most part the loftiest summits only in each group of the district. At that time it was still the custom, as well with many of the climbing fraternity as with the general bublic, to measure the difficulties to be overcome in an ascent and to value the conquest of a peak by the standard of its height above mean sea-level. As a natural consequence, only the highest points of each mountain group were considered worthy of serious attention, and the lower peaks and ridges were entirely neglected. But there came a time when the supply of unconquered summits began to fail, and those imbued with a passion for first ascents were forced to break fresh ground by attacking the lesser peaks of the various Dolomite groups.

In my youthful attempts at mastering the rudiments of elementary physics, I remember being struck by the constantly recurring law by which the factor to be ascertained in all problems I attacked appeared to vary inversely as the square or the cube of one of the known factors, and it has frequently occurred to me that some similar law might be evolved with regard to the relation between the size of any peak and the difficulties attending its ascent-namely, that the difficulties will be found to vary inversely as the cube of the bulk of the mountain; for the highest mountain masses, far from presenting the most difficult climbing, are comparatively easy in this respect, and the Dolomite peaks are no exception to the rule. The higher peaks, such as the Marmolada, Monte Cristallo, Antelao, Pelmo, and others which once held the field, have yielded in climbing interest to such comparatively insignificant pinnacles as the Kleine Zinne, the Fünffingerspitze, and the Winklerthurm. Owing to the peculiar formation of these Dolomite mountains, consisting of nearly horizontally bedded strata traversed usually by a sharply defined system of vertical joints, there is a tendency amongst the smaller peaks to weather into pinnacles whose sides fall steeply in vertical and occasionally overhanging precipices marked out by the prevailing lines of jointing of the rock. is these precipices, ledges, and joint-rifts thus produced which form the walls, traverses, and chimneys so dear to the heart of the enthusiastic rock-climber. Unfortunately, owing to their inferiority in elevation and their situation on the flanks of more lofty

eminences, the views obtained from their summits are not in proportion to the difficulties overcome in obtaining them. But this is an age of specialists, and already a race of climbers has sprung up whose sole satisfaction in making an ascent avowedly consists in the physical pleasure of rock-climbing for its own sake. On the other hand, some of the "old guard" of alpine pioneers-now, alas! a gradually diminishing band-from their expressed opinions would appear still to maintain that mere difficulties of ascent, such, that is to say, as are due to steepness of inclination and imperfection, or absence of hand and foot hold-are not essential to the enjoyment of mountain-climbing as a sport, if indeed they are not to be condemned as requiring gymnastic exercise degrading to the dignity of the true mountaineer.

Without necessarily sharing the extreme enthusiasm for vertical and overhanging precipices possessed by the most enthusiastic members of what has been described as the younger school of climbers, many of whom look upon ice and snow as necessary evils in the ascent of a high mountain, no one who has tried a good rock scramble can deny its delights.

We are not all gifted with the remarkable physical prowess of the late Mr. Mummery, and many of us are limited by nature in what we can surmount with enjoyment. I once overheard a philosophical member of the Alpine Club reply

to a dweller in the valleys, who, without sufficient knowledge of the circumstances, was condemning one of Mummery's most brilliant rock-climbs as foolhardy on account of its difficulties, "But to Mummery they were not difficulties"; and the answer might supply the text for a dissertation on difficulties, particularly those of rock-climbing. For it cannot be denied that no two climbers will assort the various mauvais pas to be encountered on a particular ascent in the same order of difficulty. Quite recently Mr. Wherry has shown that the line which separates the amateur climber from the professional, not entirely obliterated by even the best amateurs, is not wholly due to practice and knowledge of the craft, but also to hereditary tendencies, especially as regards the prehensile power of the foot, which in the professional retains a much greater share of its infantile Rexibility than does that of the average amateur. In the Dolomites, however, climbs of every degree of difficulty may be obtained, together with some of the most beautiful scenery to be found in the Alps, with the omission of one conspicuous featurenamely, extensive snowfields and glaciers. compensation for this, however, in place of the barren Alps and straggling larch plantations, we have beautifully wooded valleys, and lakes and streams abounding with the most exquisite trout. One of the chief reasons for the neglect shown by Englishmen for the district may be the poor

accommodation formerly afforded to travellers, the only fresh meat obtainable being, as a rule, veal; but a great improvement has taken place in this respect of recent years, especially in the Cortina district, to which Signor Sinigaglia has confined himself in the following pages. With regard to the climbs themselves, they are short compared to the average Swiss peaks, two or even three summits being not infrequently ascended in one day, and with a few exceptions these can all be reached from the nearest village without sleeping out; not, however, that a night spent at one of the admirable huts provided by the Austrian Alpine Club is by any means a hardship, as they are little short of luxurious mountain hotels.

Compared with the other districts of the Alps, the Dolomites have been until recent years curiously neglected by the majority of English climbers. This neglect is reflected in the dearth of English literature on the subject, no work dealing exclusively with this mountain group having appeared in English down to the year 1894, with the brilliant exception of Gilbert and Churchill's "Dolomite Mountains," published in 1864, followed a few years later by Miss Edwardes's "Untrodden Peaks and Unfrequented Valleys"; but none of these authors were mountaineers, and the scanty allusions to actual ascents are brief, and the facts on which they are founded obtained at second hand. In 1894 Mr. Sanger Davies's little book appeared, describing the

ascents of some of the most interesting of the Dolomite peaks, and this completes the list of English works on the district, Several notes and one or two interesting papers have, however, been published from time to time in the pages of the "Alpine Journal." Amongst these may be mentioned a paper on the Dolomites of San Martino di Castrozza, by G. Scriven; another on the mountain group of the Rosengarten, by C. C. Tucker; and "Sketches from the Dolomites," by Iulius Meurer; in addition to which we have a paper on the Peaks of Primiero from the classic pen of Mr. Leslie Stephen, in which he describes his first ascent, in 1869, of the peak in that group which now bears the name of the "Cima di Ball." Of guide-books in English we have but few, the volume of Ball's series dealing with the Eastern Alps being by far the fullest and best, especially with regard to its mountaineering information.

As might be expected from what has been said, foreigners have accomplished more first ascents in this district than Englishmen. The Marmolada, the highest of the group, was first ascended by Grohmann, who had previously made an unsuccessful assault on the peak in 1862. Ball and J. Birkbeck had, however, arrived within a few feet of the second peak of the mountain, or Marmolada di Rocca; the first English ascent of the Marmolada di Penia being achieved by J. and A. Bryce, Lee Warner, Nettleship, and Oxenham. The first

Englishmen to ascend the Antelao were Lord Francis Douglas and Latham, in 1864, but Grohmann had made the first ascent of the mountain the year previously. The chief peaks ascended for the first time by English climbers were those of the San Martino group. Of these the Saas Maor was first ascended, in 1875, by Beachcroft and C. C. Tucker; the Cima della Pala by Whitwell; the Cima di Vezzana, in 1872, by Freshfield and Tucker. Other English ascents in the Dolomites are the Civetta, first ascended in 1867 by F. F. Tuckett, Blackstone, Howard, and Hare; the highest peak of the Rosengarten, of which T. H. Carson and C. C. Tucker made the first recorded ascent; and the Cima di Canale, ascended by C. C. Tucker. Of the ascents in the Cortina districts described by Signor Sinigaglia in the following pages, scarcely any can be credited to Englishmen. The north-west peak of the Cristallo was first ascended by J. Stafford Anderson in 1881, whilst the north peak of the Tofana was climbed by J. Bonney in 1867. Several works on the climbs in the Cortina group of the Dolomites have appeared in German, amongst which may be mentioned especially Herr Grohmann's "Wanderungen," Zsigmondy's "Im Hochgebirge," Eckerth's "Gebirgsgruppe des Monte Cristallo," and the beautifully illustrated works of Herr Theo. Wundt. We have also papers in the Swiss and French Alpine Club journals, and finally the Italian contributions to the "Bollettino del Club Alpino Italiano," in which the admirable account of his climbing exploits by Signor Sinigaglia, translated for the first time into English in the following pages, first appeared.

Every year larger numbers of English climbers find their way to Cortina, and the dearth of a good book in English on the more interesting and recent climbs in this district is much felt. Signor Sinigaglia's account is limited to a description of ascents in the immediate neighbourhood or within easy reach of Cortina. These are described in great detail and with great accuracy by the Author, being all narratives of personal ascents. Besides describing his experience on old tracks, he describes for the first time his ascents of the Croda da Lago and Monte Cristallo by new routes.

Notwithstanding his comparative youth, Signor Sinigaglia has had considerable experience in Alpine work, having previously ascended many important Swiss peaks; amongst them may be mentioned his memorable ascent of the Italian side of the Matterhorn in 1890. It was during his attempt on this historic peak, on August 23rd, that this fascinating mountain claimed one of the latest of its victims, in the person of his guide, Jean Antoine Carrel, who lost his life from fatigue and exposure on the mountain indelibly associated with his name, of which he had a more intimate knowledge than any living man, having made the first ascent from the Italian side immediately after Whymper's famous

ascent from Zermatt which terminated fatally for the majority of the party.

Carrel started on August 23rd from Breil, with Signor Sinigaglia and Charles Gorret, of Valtournanche, intending to cross the Matterhorn; owing to a sudden change of weather they were confined to the hut on the Italian side with little to eat, the temperature falling considerably below freezing-point during the night. On the 25th they gave up the expedition, and started to return to Breil at 9 a.m., the wind still blowing violently. The difficulties they encountered in the descent were immense, the rocks being glazed with ice and the ropes half frozen, the whole side of the mountain being in addition covered with fresh snow, which obliterated all sign of the necessary hand-holds. Owing to this the Col du Lion was not reached until 2.30 p.m. Here the wind increased to a hurricane, nearly suffocating the party with snow and plastering their eyes with ice, while Gorret, having lost a glove, sustained frost-bite in one of his hands. At 11 p.m. they were still battling their way down the rocks. It was shortly after this that Carrel succumbed to exhaustion. Signor Sinigaglia's account of his death is one of the most pathetic stories in Alpine literature. Referring to the spot where Carrel died, he says: "From

¹ Account by Signor Sinigaglia, in "Rivista Mensile del Club Alpino Italiano," 1890, p. 293, and "Alpine Journal." vol. xv. p. 284.

this place a short, steep passage takes one down to the pastures, where there was safety. descended first and I after him. We were nearly at the bottom, when I felt the rope pulled. We stopped, awkwardly placed as we were, and cried out to Carrel several times to come down, but we received no answer. Alarmed, we went up a little way, and heard him say, in a faint voice, 'Come up and fetch me, I have no strength left.' We went up and found that he was lying with his face to the ground, holding on to a rock, in a semi-conscious state, and unable to get up or to move a step. With extreme difficulty we carried him up to a safe place, and asked him what was the matter. His only answer was, 'I know no longer where I am.' His hands were getting colder and colder, his speech weaker and more broken, and his body more still. We did all we could for him, putting with great difficulty the rest of the cognac into his mouth. He said something and appeared to revive, but this did not last long. We tried rubbing him with snow, and shaking him, and calling to him continually; but he could only answer with moans. We tried to lift him, but it was impossible—he was getting stiff. We stooped down and asked in his ear if he wished to commend his soul to God. With a last effort he answered 'Yes,' and then fell on his back, dead, upon the snow.

"With broken hearts, we cut the rope which bound us to our dear brave companion, and continued the descent. We arrived at Breil at five in the morning (of the 26th), having walked twenty hours without food or rest. Under ordinary circumstances the descent from the hut to Giomein (Breil) is accomplished in from four to five hours."

A little iron cross now marks the spot on the Alps above Breil where Carrel lay down and died, having faithfully guided his party during that terrible night until they had reached a place of safety.

EDMUND J. GARWOOD.

ADVENT BAY, SPITZBERGEN.

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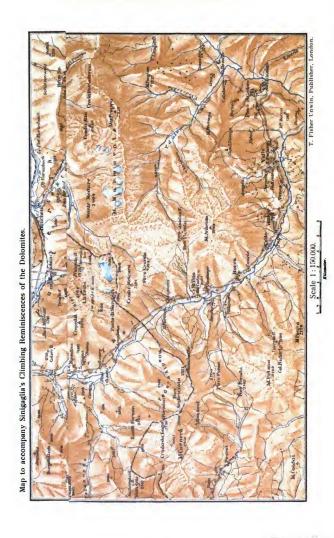
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CORTINA

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CORTINA, FROM BELVEDERE.

(From a photograph by Alois Beer, Klagenfurt.)

CLIMBING REMINISCENCES OF THE DOLOMITES.

TOWARDS the end of July, 1893, I arrived at Cortina d'Ampezzo (Tyrol), which this year I had chosen as a climbing centre for the Dolomites. Two years of enforced cessation from climbing had stimulated to the utmost my impatience to be back at my favourite pastime, and it seemed to me that no Alpine group would give fuller scope to an ardent cragsman than the Dolomites.

A perusal of Emil Zsigmondy's splendid work, "Im Hochgebirge," powerfully influenced me in this choice. Poor Zsigmondy, as is well known, had a predilection for these peaks. It was the Dolomites which inspired his most vivid and impassioned pages, and no one knew better than he how to portray their fascination—a fascination that I found undiminished on reading anew his book when I returned from achieving my ascents. Another incentive for me to visit the Dolomites was the really unpardonable dearth of Italian

CLIMBING IN THE DOLOMITES.

climbers turning attention to this magnificent region, so much frequented by mountaineers, and by, among the best, many English and German climbers. I hoped, therefore, to find, under these conditions, new and interesting ground to explore.

Cortina d'Ampezzo can be reached, as we know, in a day and a half from Turin; the time, namely, that it takes to get to Dauphiné or to Zermatt, to the Oberland or the Engadine. The shortest route, by the Brenner railway to Franzensfeste, and thence by the Pusterthal railway to Toblach, is also the most attractive and picturesque. To vary the return journey, that by Belluno and Pieve di Cadore is recommended. Cortina is one of the most agreeable of summer resorts, and its climate, taking into consideration its height (3.985 feet), is of exceptional mildness, for it allows of one staying there all through September, and even later, and that season is very favourable for ascents, particularly for short ones.

There is a good number of hotels, of which several are much frequented in the season. The "Croce Bianca," in particular, is favoured by tourists, who there meet with the most cordial reception, and with every kind of attention. To those who love quiet, I would especially recommend the new "Hôtel Faloria." picturesquely situated on a hill, close to a pine forest, and ten minutes' walk

¹ The shortest route from England is viâ Innsbruck, Franzensfeste, and Toblach.



ALESSANDRO LACEDELLI, AMPEZZO GUIDE.

(From a photograph by G. Ghedina, Cortina.)

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from the village. Signor Menardi and his wife, who manage it, are most kind to the mountaineering fraternity, Signora Menardi herself being an enthusiastic rock-climber. However, you are well cared for in all the hotels of Cortina, from the greatest to the least, for hospitality and courtesy are traditional among the inhabitants.

Cortina possesses a well-organised company of guides, some of whom I shall often have occasion to name. Several of them are excellent, and unite an exemplary steadiness and judgment to a perfect knowledge of their art. No accident has, as vet (1893), overtaken climbers with guides from Ampezzo, and of this distinction they are deservedly proud. There even exists in it a vouthful. but active branch of the "Austro-German Alpine Club," presided over at the present time by Signor G. Lacedelli, a gentleman most courteously willing and able to furnish mountaineers with useful information. Climbers can also refer, with advantage, to Signor R. Apollonio, proprietor of the "Hôtel Cortina:" to Signor F. Müller, of the new "Hôtel Victoria;" or to Signor Verzi, of the "Croce Bianca": and to the old guide of Grohmann and Euringer (two notable explorers of the Dolomites in the "heroic age"), Alessandro Lacedelli, now retired from active service, but still full of youthful ardour, and capable also, as he proved this year on the Croda da Lago, of victoriously showing the vigour which still survives in his muscles of steel,

Let climbers then not forget Lacedelli, the beloved and respected patriarch of the Cortina guides; nor again old Santo Siorpaes, of Schluderbach, who, in his time, fulfilled a series of new and important ascents in the Dolomites, and who, with Lacedelli and the lamented Michel Innerkofler, was the favourite guide of the first explorers of the group.

Cortina possesses, among others, two interesting attractions-the celebrated Industrial School for Wood work, a flourishing institution, where very tastefully-made articles are produced; and the graceful girls with fresh pretty faces, clad in gay native costume. In concluding this account, one of Cortina's most important features must not be forgotten - that is, the splendid campanile, which towers so proudly over the "Magnificent" Community of Ampezzo, as the phrase still goes. said that poor Zsigmondy, well remembered and much lamented at Cortina, with vouthful audacity, one day walked twice round the edge of the highest balcony. The police gave chase, but he hid in a dark corner, and let them climb, and when they had passed, he effected his escape by descending the stairway with lightning rapidity. "Poor Zsigmondy," says more than one of his friends at Cortina, "had he only stayed among his beloved Dolomites, instead of seeking dangerous escalades in the far-off peaks of Dauphiné, perhaps he would not now be resting all these years a victim to his own daring in the quiet little graveyard of Sexten!"



TORRE DI AVERAU (7,760 FEET), AND PUNTA NORD DEL NUVOLAU (8,688 FEET).

ON the 28th of July, at 4.45 a.m., I left the "Hôtel Faloria" with Tobia Menardi, a Cortina guide. Our intention was to ascend, more by way of recreation than as a task, the highest northern Peak of the Nuvolau, and returning, to climb the Torre di Averau, that strange colossus of rock which towers above its satellites on the large plateau of Averau, and displays, seen from Cortina, a smooth, vertical wall, cleft by a deep fissure.

The carriage-road begins a little below the church, and, after having crossed the Boite, ascends in windings by the meadows of Grignes and Lacedell, and inclines somewhat to the left towards the Belvedere di Crepa, traversing a short and romantic forest-tract, to come out afterwards on the green plain of Pocòl (4,920 feet). Here now stands the new "Tofana Hôtel." It is unpretentious, but well managed, with simple, but cheerful rooms, and is conveniently situated for the ascents of the Croda da Lago, Nuvolau-Averau, and Tofana. A few minutes'

climb higher up is a little inn, and from here the footpath that leads up through Valle Formin branches off to the left. We continue on through a pleasant pine-forest as far as Ciamp Zoppé (from this side we have an interesting view of the imposing smooth wall of Tofana di Razes), where, leaving to the right the road to Falzarego, we take a bridle-path, which crosses the brook of Costeana, to ascend afterwards with long windings a steep slope covered with a beautiful forest of pines, from which, after half an hour of straight climbing, we emerge suddenly on the vast depression of Averau, gay with grass and flowers.

The view from here of the peaks that form a crown to the Ampezzo valley is very attractive. Especially interesting is the formidable western face of the Croda da Lago (towards Valle Formin), a precipice which has aroused the longings, up till now ungratified, of more than one hardy climber. Characteristic likewise is Cristallo, with its exceedingly steep and unpromising western face looking on to Cortina. The classic mountain, now trodden and climbed almost daily during the season, has on this side alone preserved intact its inviolability. To the north the Croda Rossa, so striking in its form and colour; to the east Sorapis and Antelao, with the distant view, mellow-tinted and serene, of Cadore, complete an exquisite picture.

But, without doubt, the most characteristic and truly astonishing feature in the landscape is the group of the Cinque Torri, or Five Towers of Averau,1 in our immediate vicinity. It is difficult to give an idea of the fantastic beauty of these enormous masses of rock which rise from the vast and broken plateau, clearly outlined against the sky, and fixed in the strangest forms, from that imposing colossus of highest rock (about 580 feet high) to the other grotesque obelisks, overhanging, disintegrated, fissured, and contorted, survivals of who can tell what formidable geological upheavals, which have left this cyclopean accumulation, standing as a testimony to the colossal work of destruction, like the ruins of a temple dedicated in a remote age to some Alpine Isis. The smooth perpendicular rampart of the highest tower which faces Cortina is well seen from here. A very deep fissure rends it from top to bottom.

To get a complete idea of the Torri you must go all round them, but especially penetrate into the heart of this world of strange chaotic conformations. This we may hope to do on our return from the Nuvolau.

After a brief halt near the clear, fresh spring, a little below the dilapidated huts of Averau, we proceed, at 7.40, to climb in a westerly direction through spacious and beautiful meadows, fragrant with vanilla and edelweiss, following the excellent

¹ Great and small together, these towers much exceed the number of five, but five only are especially noteworthy. Of these, I believe, only the first and highest, the real Torre di Averau, and two others, have been climbed.

path as far as the foot of the last short ascent, where abruptly turning to the left of the climber, it leads to the Sachsendankhütte, of which we command a view. Leaving the footpath, we turn northwards towards the steep southern side of the Nuvolau, and we bear, in a short horizontal line, over the wide belt of screes which surrounds the base of the mountain, to the foot of its eastern side, by which the ascent is generally made. Some easy ledges of rock lead us to a short little chimney, and from the top of this, bending a little to the south-west by easy terraces of rock and detritus, we gain the summit (9.35 a.m.).

A mist, which persistently refuses to lift, deprives us of all view; and it is a pity, because the panorama from the Nuvolau is said to be most extensive and interesting. Nor is it worth the trouble of making the ascent for anything else, on this side at least. Only now and then do we obtain a glimpse, through some rent in the clouds, of the enormous

¹ The Sachsendankhütte (8,242 feet) was originated and constructed at the expense of Herr Meerheimh, of Dresden. It is a commodious hut, destined to facilitate the passage of the Nuvolau between Cortina and Caprile.

² Three other much more interesting routes lead to the summit—that followed by Herr Issler with the guide Santo Siorpaes (July 10, 1874. See "Zeitschrift des Deutschen und Oesterreichischen Alpenvereins," 1876, vol. ii.); that by the south side, adopted by Herr Fikeis with M. Innerkofler (see "Zeitschrift," &c., 1877, p. 346); and the one by the northeast face, taken by Herr H. Eissler, with Arcangelo Dimai as guide (see "Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1882).

slopes of Marmolada, the queen, as far as height goes, of the Dolomite Alps. Having in vain waited for it to clear, at 10.10 a.m. we set out again. By the same route we arrive shortly at the foot of the rocks, and from here to the base of the Cinque Torri, taking twenty minutes from the top of the Nuvolau.

The Torre di Averau shows from the west side. that facing the Nuvolau, a very steep wall, cleft by a large irregular fissure formed like a chimney, which, at a distance, deludes us with the possibility of an ascent from this side, whilst close at hand it appears, by reason of the vertical precipice which stretches for three-fourths of its height, quite insurmountable. After going round this wall towards the north, treading a narrow strip of screes, and flanking enormous masses fallen from the Torre, we bear to the foot of the well-marked chimney on the northern face, by which we accomplish the short ascent. Here is one of the most favourable positions for admiring the ensemble of the Torri. It is a weird spectacle. We are surrounded on all sides by fantastic and multiform columns of rock. Right in front of us rises the second tower, very steep and uncompromising. Most pointed of all is the last, bending right over at its northern extremity towards Tofana. The ascent of this sharp spire, never as yet achieved, must be, I should say, a rugged, though not a lengthy, climb. Between both these Torri a marvellous vista is afforded of the rocky precipices of Tofana di Razes, of the green pastures of Falzarego, and of the distance towards Ampezzo.

We stop half an hour at the foot of the Torre, where we find, returning from the climb, a German tourist and his wife, with the guide G. Barbaria, who are taking photographs. At eleven o'clock, after leaving our encumbrances behind, we start up the chimney. After a few easy steps of rock, and a smaller narrow chimney, we pass, bending somewhat to the right, by a natural gallery of rock, and, turning to the left, we come out upon a little platform, whereon lie scattered, poised here and there bridge-wise, huge masses of rock. This is just where the rift in the western face of the rock, of which I have spoken above, ends. Then diverging again in an easterly direction, we descend into a rocky hollow, then remount into another gallery, to come out once more on a second small and narrow terrace of rock.

Here we suddenly find a change of scene. We are in the very heart of the Torre, and it is from the interior that we must make the last and best stage of the ascent. The colossal mass is all upheaved, dislocated, and broken up into bridges of rock, cavities, crevices, buttresses, and chimneys. It would be difficult to find another equally extraordinary specimen of rock-architecture as this. Three lofty rugged walls, converging from all sides, dominate the narrow caldron. The one to the



CINQUE TORRI, TOWARDS THE NORTH.

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south is overhanging; the other, towards the east, is very steep, and here and there is more than vertical. The northern side is also precipitous. Between the two points, looking towards the valley of Ampezzo, gapes a chasm, whose depths are lost in obscurity. Between the east and north walls, which are very close and in certain places nearly join, runs a narrow gully, nearly vertical, by which the ascent is made. Only on the west side, in picturesque contrast, does a wider opening afford a view of part of the Nuvolau and of the meadows below. Above, against the blue sky, the rigid, indented crests of the castellated rocks are seen outlined. At this point the climb becomes quite exciting for the cragsman, and has been happily defined by a German mountaineer as the "Cabinetstück einer anregenden Felstour." 1 You diverge in a northerly direction, by a narrow little chimney, passing through a close rocky aperture, then leaving the chimney, where it suddenly terminates, on the left, you climb by a flat rock-face, with good footholds, as far as a narrow niche at the foot of the last steep gully. Here the escalade approaches the vertical, becoming decidedly so at the final scramble. But the rock is very solid, the finger-holds excellent, and quickly, all too soon indeed, is the western summit reached (7,760 feet), a fairly wide platform, slightly inclining towards the Nuvolau (time 11.35).

¹ Herr Doctor Böhm. The "Cinque Torri" (in the periodical of "Der Tourist," 1889, n. 16).

The view is fine, but not much more extensive than that from the table-land of Averau. At 12.20 we retrace our steps by the same way as far as the first terrace, the first, that is, going down. Having arrived here, I propose to Menardi to try the descent by the cleft in the east wall, towards Cortina, in which, it seems to me, we can get through a cavity that I carefully noted when going up. My guide consents with alacrity, but though curious to try it, has little hope of success. In fact, seen from the base opposite, such a route down appears a mad undertaking. The Torre, however, is decidedly a "boîte à surprise." We let ourselves down into the cavity on the side opposite that ordinarily chosen, and we find ourselves right inside the gloomy and narrow cleft. From this first cavity we descend into another, through rocks, not difficult, but smooth and saturated with water. through a third, and thus on, till we get to where we can see the sun again, when the cleft ends, as it converges on to a shelf of rock, a few yards high, at the base of which is the plain of Averau. Descending first, I let myself down direct on to the turf, then invite Menardi to follow. But to my surprise he suddenly disappears, to emerge quickly with a mischievous smile, on the grass by another aperture, which I had failed to observe. It was a very curious descent and one of the most amusing imaginable. I believe, too, it was a new way. In a few paces from the base of the Torre, we were at the spring of Averau, where we, stretched out on the grass, remained two hours to enjoy the pleasant noonday sun. How difficult it is to make up one's mind to resume the road down to the valley, and thus break the web of vague delicious reverie that, under such conditions, one can weave without end! However, at three o'clock we set out again, and after long delays and windings in the flowery meadows of Pocòl, we are back at Cortina at six o'clock.

I cordially recommend the ascent of the Torre. It is short-indeed, too short-safe, and very interesting, whether from a mountaineering or a picturesque point of view. However little practice one may have had in climbing, there is no difficulty attending it, and it is surprising to read of the great difficulties met with by the first climber, Mr. T. E. Wall, September 17, 1880, when his guide, G. Ghedina, comparing the Torre di Averau with the other Ampezzo peaks, remarked that "in not one of this mountains here is the most little bit as hard as the easiest in this." It is still more incomprehensible how Mr. Wall took three hours to climb the 580 feet of the Torre and two hours and twenty minutes to descend, whilst an expert climber can complete the ascent and descent in one hour.2

^{1 &}quot;Alpine Journal," vol. x. p. 180.

² From the second terrace of the Torre the southern peak can be reached by a short though rugged climb (see E. Richter, "Die Erschliessung der Ostalpen," p. 486); Herr

14 CLIMBING IN THE DOLOMITES.

In conclusion, it is advisable to make the ascent of the Torre on a fine, clear day, arranging so as to arrive at the base towards sunset. I repeated my expedition under these conditions a few days after. with a courageous and spirited, although till then unpractised, climber, Madame Daisy Neumann, of Berlin, who, quite a novice at mountaineering, returned from this excursion a genuine enthusiast. and, in a few days, achieved with wonderful ease, Cristallo, the Becco di Mezzodì, and the Croda da Lago. We had an exceptionally fine sunset. The effect of the glimpses of Tofana, of the Ampezzo valley, and the Nuvolau, through the rocky crevices, limited by the narrow walls of the Torre that appeared all on fire in the wild, vast, flaming sunset-sky, was never to be forgotten.

L. Treptow, accompanied by Seppl Innerkofler, of Sexten, was the first to achieve the passage, rendered more arduous by reason of the bad rocks, from the highest to the lowest part of the very curious summit.

CORTINA, CRODA DA LAGO, BECCO DI MEZZODÌ AND PELMO. (From a photograph by Gledina, Cortina).

BECCO DI MEZZODÌ.

(spezialkarte, 8,430 feet; carta it, 8,534 feet; merzbacher, 8,692 feet.)

In the southern group of peaks that make so beautiful a crown to Cortina d'Ampezzo, is to be distinguished, in spite of its comparatively lesser elevation, a sharp spire of characteristic aspect, which Ball, with a somewhat realistic comparison, defines as: "A remarkable projecting carious tooth of dolomite rocks," This peak is the Becco di Mezzodi, which rises nearly in front of Pelmo, between the Rochetta and the Croda da Lago (from which the Forcella d'Ambrizzola separates it), between the Costeana Valley on the north, from Boilà on the east, and Fiorentina to the south.

The Becco di Mezzodì had already attracted the attention of Grohmann, who deserves the most credit among the early explorers of the Dolomites; but the first ascent was only achieved on July 5, 1872, by Mr. S. Utterson Kelso with Santo

¹ J. Ball, "Eastern Alps," p. 505.

Siorpaes, of Schluderbach, as guide.¹ They, after having in vain tried the eastern side, and having given up attempting those to the north and south, because they looked so unpromising, searched for a way by the south-south-west face, surmounting first a deep gully, turning southwards towards Pelmo, then climbing up two straight, but not particularly difficult chimneys—without touching the southern arête—which in a few paces conducted them to their goal. This short but attractive ascent has since been often repeated, always by the same route, by, among others, the famous mountaineer, Gottfried Merzbacher, who gives an accurate and interesting description of the magnificent panorama ² from the top.

On the 30th of July, I left Cortina at 5.0 a.m., with the guides Tobia Menardi and Charles Gorret, of Valtournanche; the latter I had induced to come to the Dolomites, in virtue of an old promise, and he was now acting as porter with special charge of the photographic apparatus. Leaving on our left, after a few minutes' walk, the high road to San Vito, and passing the village of Campo, we commenced the ascent of the excellent path which winds up through the dark but beautiful

^{1 &}quot;Alpine Journal," vol. vi. p. 201.

^{2 &}quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1879, n. 3. "By another route, nuch more difficult than the ordinary one, the guides Costantini and Zangiacomi, of Cortina, by themselves gained the summit, climbing the eastern side of the mountain."

pine-forest towards Federa. It was almost like a magic vision, when suddenly at a turn in the path, there appeared before us, superbly framed by the lofty thick pines, the precipitous wall of the Croda da Lago, all glowing in the red of the rising sun, with its needles standing sharply out in the cold morning light. When we arrived at the wide green basin of the Federa Alp (about an hour and threequarters' walk from Cortina), and the whole of the incomparable Croda was displayed in all its magnificence, with its imposing precipices, perpendicular for the most part or overhanging, so that whoever sees it from here can but ill conceive how and where it may be surmounted, Gorret was absolutely dumbfoundered. "Diables de montagnes," he exclaimed, in his picturesque Valtournanche way, "on devient presque sauvage en les regardant!"

We stopped some time at the Federa Alp, so completely absorbed in admiration of the Croda da Lago, that we hardly thought of giving a glance to the lovely panorama of the Ampezzo Dolomites, of the more distant ones of Sexten, and of part of the Cadorine Alps towards Antelao. Close to the Croda, our Becco di Mezzodì looked very alluring, with its sharp, impertinent little spire, and its smooth northern wall, which faces the Federa Alp Resuming our journey at 7.15, we continued the ascent through flowery meadows on a gentle incline, and at 8.15 were on the Forcella d'Ambrizzola, or da Lago (7.468 feet), between the Becco di Mezzodì

and the Croda; the latter seen from here, presents a very different and quite characteristic aspect. It is, moreover, very interesting to observe how, at almost each step during our ascent from the Federa Alp towards the Forcella da Lago, this wonderful mountain assumes a new appearance. From the Forcella the coup d'ail is beautiful, especially of the neighbouring Croda, and of Pelmo which faces us, with its imposing precipices towards the Val Fiorentina. To the south-west are to be also seen the Dolomites of Primiero, to the right of the large mass of Civetta. To the north and north-east the panorama is just as beautiful towards the Dolomites of Ampezzo and of Misurina, especially if, advancing a little on the Italian side, you turn to look at it behind the picturesque frame that the prominent buttresses of the Croda and the Becco di Mezzodi make for it.

From the Forcella da Lago, leaving on our right the footpath which descends to the valley towards Caprile, we round the south-east sides of the Becco till we reach the base of a narrow sandy gully (just facing Pelmo), which we climb as far as its summit, where the rock work begins (9 a.m.). From here the wall to be scaled, very short but steep, is temptingly displayed.

After a few minutes' halt, taking off our nailed boots and putting on the soft "Kletterschuhe," 1

^{*} These "Kletterschuhe" ("string-shoes"), or "scarpe da gatto," as they are called at Cortina, are extremely useful on

highly esteemed, and justly so, in the Dolomites, we begin the climb. But after this all is soon told. We mount first by an easy chimney of seven to eight yards, then, diverging a little to the right, we take another narrow one, about twenty-five yards long, very interesting on account of its steepness and, here and there, the insufficiency of the hand-holds. In short, the principal ridge is soon reached by easy rocks, and, by inclining to the north, in a few paces the summit is gained (9.40 a.m.). The ridge is of friable rock, already in a crumbling state. Rydzewsky, referring to his ascent of the Becco di Mezzodì, says, picturesquely, that he felt it "wie lebendig geworden."

The view from the top is, on account of the position, one of the finest that the Ampezzo peaks afford. A feature in it, very interesting because less known, is where the groups of Bosconero, Duranno, and Cridola run towards the south: ranges boasting of some fine peaks, which have only been explored during these last few years. The panorama comprises even the far-off snow-capped summits of the Oetzthal, Rieserferner, Zillerthal, Gross-Glockner, and Ortler.

Leaving the summit at 10.10, and returning by the way we had come up for want of a better, we reached the foot of the rocks in less than half an

the smooth rocks, especially on the flat slabs of rock. At Cortina those of Schweiger, of Monaco, are much used, but much more durable ones are manufactured at Vienna. hour, and at twelve o'clock had arrived at the Federa Alp, where the shepherds offered us some excellent *puina* (clotted cream), cordially to be recommended. As an inevitable consequence, we were somewhat disinclined to resume our way back to Cortina, under the hot afternoon sun. Fortunately, the welcome shade of the pine-forest rendered the descent less toilsome. At 3.30 we were back at the "Hôtel Faloria."

The ascent of the Becco di Mezzodì is short, agreeable, and interesting. The rocks we did not find so bad as some climbers have described them.¹ The hand-holds are now and then inconvenient, but good. The view is truly magnificent, and the expedition can be achieved comfortably in eight hours from Cortina.²

"Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1890, n. 17. Account by E. Chambon.

The Becco di Mezzodi has acquired a certain reputation for danger after the accident of Herr Wilhelm Behr, of Hamburg, who attempted the ascent alone. It would appear that he kept too much to the right, at a point where the rocks were particularly bad, and it was simply the sudden giving-way of a stone, of which he had taken hold, which caused the disaster. To the right of the second chimney is a steeper rock-face, which has sometimes been adopted, but the chimney where the rock is better is to be preferred. There are interesting details about Herr Behr's accident, otherwise well known, in the "Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1891, pp. 221, 234, 246; and an abridgment of it in the "Rivista," 1801, p. 31, p. 31.



SCHLUDERBACH, WITH CRODA ROSSA.

From a photograph by G. Ghedina, Cortina.)

CRODA ROSSA (10,276 FEET).

In traversing the magnificent coach-road which runs from Toblach (Pusterthal) to Cortina d'Ampezzo, the eye is caught at Schluderbach by a bold and magnificent peak which rises to the south-west, conspicuous among the rest by the beauty of its formation and the characteristic colour of the rock, which last is visible a long distance off, hence its name of "Croda Rossa."

The first ascent of the Croda Rossa dates back to 1866—Whitwell, with Santo Siorpaes as guide. The previous year it had been vainly essayed by the indefatigable Grohmann, who gives an account of the attempt in his "Wanderungen," not without some blame for his guides, who judged the last part of the ascent impracticable—that same crag, just under the summit, which all the climbers of the peak now surmount in the ordinary way, without finding any special difficulty.² This route branches off from Ospitale by the Valle Gotteres,

² See Grohmann, op. cit. pp. 168-70.

The German name, "Hohe Gaisl," which is often met with in guide books and maps, is not the popular one.

the Valle Buones, and the southern side of the mountain.

Another way, much more difficult, and not, generally speaking, to be recommended, on account of the bad rocks and falling stones, was discovered by Herr J. von Schlöger-Ehrenkreuz and Michel Innerkofler, August 13, 1883, and leads direct from Schluderbach by the eastern side. This ascent has since then been several times repeated, as much more interesting than the other. In this climb some important alternative routes were found by Herr Winkler 2 and Herr Zilzer (with Pietro Dimai as guide),3 the former keeping more to the northeast of the face. Both of these variations, however, and especially the former, are more difficult than the Schlöger-Ehrenkreuz route.

A third way was discovered by Herr F. Drasch, setting out from the Platzwiesenhaus, on the western side. He describes it as difficult, but less exposed to falling stones. However it may be, the palm for safety and popularity can still be claimed for the route adopted by the first mountaineers on the south side.

On the 1st of August, with Tobia Menardi and C. Gorret as guides, I passed the night at Ospitale—an hour and a half's drive from Cortina and

¹ I found no account of such an ascent.

^{* &}quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1887, p. 257.

³ Ibid., 1888, p. 66. ⁴ Ibid., 1888, p. 189.



AMPEZZO WINTER COSTUME AS WORN IN 1840.
(From a photograph by ANION KÖIRUNER, Innsbruck)

twenty minutes from Schluderbach—where there is a little, but fairly good inn, moderate in charges. No small attraction there—at least, when I passed—were two graceful Ampezzo maidens, picturesque in their bright national costume, who perform the service of the inn.

At 3.25, on the 2nd of August, we left our hospitable quarters, to make direct for our goal. After a quarter of an hour's descent on the Schluderbach high-road, we left it on our right and took to the footpath, in some places rather steep, which, winding in and out through the forest, ascends through the solitary Valle Gotteres. Every now and then we came upon a sheep or a çow stretched at length on the grass, and still asleep, in the solemn silence of the valley, which seemed filled with hushed expectation for the nearing dawn, and at the sound of our footsteps they awoke, and looked with astonishment out of large, humid, listless eyes.

The footway winds up as far as the Alpe la Rosa out into a small verdure-clad depression. Before we get to Col Freddo we leave the valley and turn obliquely to the north, by wooded declivities and pastures rich in edelweiss, into the valley called Valle Buones, which ends at the foot of the great southern steep of the Croda Rossa. This side of the mountain forms a wonderful background to the deserted valley, with its wild amphitheatre, its line of precipitous bastions, its sharp peak, and the vast

gullies which furrow it on every side, and its huge base, engirt by an enormous field of stones.1 We continue to ascend the valley by a tolerably even path, and towards a quarter past six we arrive at the great scree slope, where we stop to admire the Ampezzo peaks, wonderfully framed by the two huge converging bastions of the Croda, and all glowing in the early sunlight. We climb slowly over the fatiguing stone-sweep, covered with multiform and many-coloured fragments, contemplating the mighty cliff that we have to scale, and which from here appears more formidable than it is in reality. We reach the base by a deep gully which descends from the south-west ridge of the Croda, towards the middle of the face. We climb this gully for a few minutes over frozen snow, then, having come to the point for beginning the rockwork, we make a halt-from 7.0 till 7.40-under a projecting rock, which forms our shelter from the stones.

Then, leaving on our left the gully which, besides being dangerous by reason of the stone-falls, would conduct us westwards by the side opposite to the point of the ridge that we ought to reach in order to win the summit, we begin the rock-climbing. This is so varied and intricate that I should find too much difficulty in recollecting and accurately laying

¹ This side of the Croda Rossa somewhat recalls, on a larger scale, the steep side of our own Uja di Mondrone towards Lago Mercurino, in the Graian Alps.

it out to trace here an exact itinerary. I shall endeavour to give a résumé of the most important points in it, always letting it be borne in mind that the trend of our ascent was chiefly from southwest to north-east.

Having surmounted without difficulty a first stage of easy rock-terraces, interspersed with cornices and layers of detritus, we pass more to the right into a wide gully, which we cross, climbing diagonally, to find ourselves in another, from which, after a short climb, we reach the arête that separates it from another larger and steeper gully contiguous. By easy rocks we traverse a good part of the arête, making little cairns in order to recognise the road again. This we are warned to do by the mist that is threatening to envelop us on every side. We then mount direct by an easy wall of rock, after having gone back for a little on the last gully. During this stage of our climb we have anything but a pleasant surprise, in the shape of a stone which, whizzing rapidly through the air, falls close to us, allowing us just time to throw ourselves on the ground, for want of better means of self-defence. Such an experience proves that this side, also, of the Croda Rossa enjoys only a relative immunity from the most serious and only real danger which mountaineers incur on these peaks.

We continue our climb by quite easy ledges of rock, in a northerly direction, making for a tooth of rock which is clearly visible and which rises

above the ridge a little to the south-west of the summit, just in front of us. We round the base of this tooth, to which a narrow chimney has led us, and, bending to the east, we traverse the face. bearing a little under the ridge, by easy cornices of rock. Cutting several couloirs, we reach a kind of wild gully, with precipitous sides, to the south and north. Before us rise vertically two conspicuous jagged towers of rock, furiously lashed by the wind and persistently enveloped by the fog which every now and then allows us a glimpse of the rocky lace-work. Somewhat to the north we know the summit must be, though from here it is invisible. Having crossed the gully, we bear over a kind of little col, which points to the east between the two towers; then, turning to the north, we cross, by means of easy ledges, a portion of the precipitous eastern wall, and are soon at the cleft that separates the northernmost tower from the summit. The latter rises temptingly before us in a sharp cliff. Its ascent by a short-fifteen to twenty feet-steep fissure, and a decidedly vertical rock with good hand-holds, is the only point of the whole climb which is perhaps not difficult, but somewhat interesting. A little more arm-work, and in a few minutes we are on the top, a relatively large platform, crowned by a "stone man," and falling on all other sides in steep precipices. It is 9.35.

The dense fog absolutely prevents our seeing



CRODA ROSSA, FROM ABOVE LANDRO.
(From a photograph by E. J. Garwood, Esq.)

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anything; it snows, and a most unpleasantly cold wind is blowing. We are, notwithstanding, sufficiently true to our purpose to remain on the summit till midday, vainly expecting an improvement in the weather to allow us to take some photographs. Only through an odd rift in the clouds can we see, from time to time, a bit of Cristallo or of Sorapis. It is unfortunate, for the view from the Croda Rossa is supposed to be one of the finest in the whole Dolomite region.

It was probably during these two hours of waiting that poor Gorret contracted a severe attack of bronchitis, which was later to render him, to his intense mortification, almost unable to follow us in our other ascents.

At 12.20, seeing it useless to persist, we descend under a continuous fall of snow, which pursues us even to the foot of the face. Although the rocks are covered with snow the descent is accomplished without difficulty, and the heaps of stone we had erected as sign-posts on our way up are useful to us in this labyrinth of ridges, arêtes, gullies, terraces, and cornices. At about five o'clock we were back at Ospitale, and by seven o'clock we arrived at Cortina.

The ascent of the Croda Rossa by the way above described is particularly interesting by reason of the imposing character of the rugged scenery through which the ascent is made. It is not, as has often been averred, fatiguing, and does not offer any noteworthy difficulty. A rope is not necessary, provided the mountaineer has had some practice in rock-climbing.

The route by the south face is susceptible of some unimportant variations; the rocks at their beginning may be attacked more to the right, though perhaps with greater difficulty, and a direct way thereby made to the tooth of rock of which I have spoken. That adopted by us is decidedly the shortest way.



CRISTALLO AND POPENA, FROM TRE CROCI.

(From a photograph by G. Ghedina, Cortina.)

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MONTE CRISTALLO (10,492 FEET).

F EW mountains in the Dolomites are as popular, and it might be said as well appreciated, as Monte Cristallo. In the season hardly a day passes without one or more mountaineering parties making the ascent, either from Schluderbach by Val Fonda and the Cristallo glacier, or from Cortina by Tre Croci and the Grava di Cherigeres. The two routes converge a little below the Cristallo Pass (9,269 feet), and the rest of the ascent is achieved by safe and easy climbing up the southern face. The fact is, that few ascents in the Dolomites offer such attractions of variety and picturesqueness of mountain scenery, combined with interesting and not by any means difficult climbing, adapted to mountaineers of even ordinary capacity.

The summit is reached, without fatigue, in five hours from Cortina and in a little more from Schluderbach. An exceptionally good walker, Herr Kuck, with M. Innerkofler as guide, suc-

³ Cristallo has also been climbed in winter. Bortolo Alverà with P. Dimai, succeeded in making the ascent in eight hours and a half from Cortina, on February 22, 1882.

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ceeded in making both the ascent and descent (from Schluderbach) in that space of time. Of the other more or less difficult routes by which the summit of this fine mountain can be scaled, more will be said hereafter in describing the first ascent by the western face. I will here give an account of an ascent that I made from Cortina by the ordinary route, and which was doubly interesting owing to the companionship of Madame D. Neumann, who had so brilliantly come through her probation a few days before, and who was now consumed with impatience to essay fresh scrambles in the Dolomites.

On the 5th of August we left Cortina at 4.30 p.m., under, the guidance of T. Menardi and S. Ghedina, with Gorret as carrier of the photographic apparatus. True to that golden rule of the climber, "Never do on foot what you can do on wheels," we went up to Tre Croci in a light carriage by the steep narrow road that goes on to Misurina, and rounding Piz Popena descends to Schluderbach. This road is noted for its beautiful scenery, and much frequented in the season by travellers, on foot and in vehicles, of every sort and nationality.

A number of interesting and amusing types are there to be met with, worthy of figuring in a comic paper. They are of all varieties, from the ardent walker, who wears the Tyrolese hat adorned with ptarmigan feather and a handkerchief round his neck, and who conscientiously toils to accomplish up to time the distance assigned to him for that day by Murray or Baedeker, to the portly and panting "Frau," devoutly following her "Herr Gemahl" who zealously fulfils the walk the doctor prescribes as highly hygienic, to recover from the fatigues of civic duties; from the youthful mountaineering neophytes devoured by "climbing fever," boasting knickerbockers of many colours, brandishing with pious ardour, spike upwards, immeasurable alpenstocks, to the family-party who are "doing" the Misurina road with as much method and Olympic serenity—the young to the front, the elders in the rear—as if taking their Sunday walk "unter den Linden."

Thus, pleasantly noting the passers-by, we follow the ascent by the Tre Croci road which crosses the picturesque little village of Alverà. Becoming steeper it leaves on the left the few small shepherds' huts of Larietto, shining in the soft light of the setting sun, on a solitary hillock. To the right we have the first spurs of Monte Casadio and of the Bigontina; to the left the ridges which unite the Croda of Pomagagnon, and of Fiammes to Monte Cristallo, whose steep western side can be seen from here. I impart to my companion, in all confidence, a plan of attack on this hitherto unconquered side of the mountain.

About six o'clock we arrive at Tre Croci (5,952 feet). It is a little to the south of Monte

Cristallo and Piz Popena, where there is a small but excellent mountain-hotel, managed by Josef Menardi, and much frequented during the season by travellers from Cortina or Schluderbach, and by mountaineers for Cristallo, for the Popena, or for the Pfalzgau Hut on Sorapis.

The view from Tre Croci is a somewhat restricted one, but Marmarole (which on the east shows its sharp peaks and little glaciers honeycombed on its long ridge), and the precipitous southern spurs of Cristallo and of Piz Popena are especially interesting. To the west the view extends over the Croda da Lago, the Nuvolau with the Cinque Torri, and Tofana. The latter mountain (in full view from Tre Croci) fulfils the important function of a barometer.

At three o'clock on the following morning we set out, with little hope of fine weather, the masses of Cristallo and the Popena being covered by a thick cloud—a bad sign. We soon overtake a mountaineering party who had started a little earlier on the steep grassy ridge which leads to the entrance of the Val d'Orici. It is an Austrian family, father, mother, and daughter, bound for Cristallo, but who are now holding a council as to the advisability of turning back. However, seeing that we persevere in the expedition they finally decide to follow our example. We pursue our way by the steep footpath which mounts zig-zag up the slope, and shortly come to the base of that wide and desolate



FROM THE FROPPA GLACIER, MARMARGLE.

(From a photograph by Alessandro Cassarini, Holognas)

gorge deeply cleft between the steep walls of Cristallo to the west, and the Popena to the east, dividing the two peaks. It is the so-called Grava di Cherigeres of Grohmann.

Whilst we climb up the long stone-slope by a footpath, or more properly speaking, a faint trace of one, the weather providentially clears a little, and the view of the fantastic spectral peaks of the Popena and Cristallo which emerge from the rents in the clouds is indeed marvellous. At last the sun appears, and the indented crests of Sorapis, and, further off, the white apex of Antelao, splendidly framed by the two gigantic spurs of Piz Popena and Cristallo which descend nearly to the valley, shine all gloriously with rose and gold, whilst the brightening sky begins to streak, with the blue tints of dawn, the sculptured peak of the Popena, whose formidable walls fall sheer down on the Cristallo Pass.

After about an hour of toilsome ascent over the stones, we arrive at a snowy cleft which descends steeply enough to the valley on our left. Here we turn sharply to the west (leaving the path by the pass which is a little higher up), and cross the frozen snow diagonally, cutting steps in it for greater safety. We recall with great amusement the laughable fright of some pseudo-mountaineer at this point, for if the much-frequented Cristallo has its tragic side in the pathetic memories of poor Michel Innerkofler's death on the glacier towards

Val Fonda, it has likewise its element of tragicomedy in certain piquant episodes that the guides relate. They tell, for example, how this particular tract of snow on a certain occasion struck such terror into a climber, accompanied by and roped with two guides, that it was only with great trouble he could be persuaded, not indeed to pursue his way, but to come out of the wide and comfortable niche wherein he had taken his stand, and seemed resolved to remain. They also tell about climbers who have taken eight and even nine hours from Cortina to succeed in not reaching the top of Cristallo: and so on.

At 5.20 we reach the first rocks of the south side. on to which we make our way by a narrow snowclad gully, then, twisting somewhat to the left, we are soon, by easy steps, at the beginning of the so-called Long Band, a long belt of rock which traverses all the south cliff of Cristallo at about twothirds of its height. We stop for a little at the first spring (9,420 feet), where we have a wonderful coup d'wil of the magnificent wall of the Popena towards the Pass of Cristallo, said to be one of the most difficult ascents in the Ampezzo Dolomites, and dangerous by reason of the stone-falls and very bad rocks. Well does the guide Mansueto Barbaria, who risked his life there, and owed his safety to the intelligence and promptitude of the climber he had with him, know this,

¹ This is said to have been Mr. J. F. Bass, of Cambridge (U.S.A.).

We proceed by the quite easy band of rock, which makes numerous angles, cutting precipitous and deep gullies that lose themselves in chasms to the south, then we bend somewhat to the north. and after about twenty minutes from the first spring the real climbing begins. Immediately we come upon a short but rather ticklish chimney, then, diverging a little to the west, and surmounting easy steps and ledges of rock, we reach one of the most characteristic points of Cristallo, the "Ploner's Platte" of the Schluderbach guides, known to those of Cortina as the "Bastone del Ploner." It is a considerable tooth of rock where Georg Ploner, of Schluderbach, in an attempt that he made before the first ascent of Cristallo was accomplished, in company with Grohmann and the guides Santo Siorpaes and Angelo Dimai, broke his arm and was obliged to remain there to wait for Grohmann, who on that day only succeeded in gaining the "Köpfl," the first point on the terminal ridge whence Cortina 1 can be seen. The first ascent was soon after achieved by Grohmann himself with the above-named guides, on the 4th of September, 1865.2

Having passed the "Ploner's Platte" we climb by a second and steep chimney, short but interesting,

^a P. Grohmann, "Wanderungen in den Dolomiten," p. 212, ct seg.

¹ W. Eckerth, "Die Gebirgs-Gruppe des M. Cristallo," 2nd ed., p. 42.

to the lively satisfaction of my valiant colleague, who displays surprising agility and ease. "If all the so-called climbers we take up could walk like that," say the guides, and I quite agree with them. Another belt of easy detritus leads us to the "Köpfl," whence we can see, far below us, the cheerful valley of Cortina, with its soaring belfry and the silver streak of the Boite. From Cortina. the mountaineers who climb Cristallo, the Croda, Tofana, &c., are very often observed through telescopes. Many who reach the "Köpfl" make a point of conscientiously waving their handkerchiefs for some minutes, whilst at Cortina people are most likely thinking of something else than waiting, with their noses in the air, for the appearance of human ants on the extreme ridge of Cristallo.

After the "Köpfl" we mount, a little towards the north, by the ridge, and we finally reach the famous "Böse Platte," so often quoted as the mauvais pas of Cristallo. It is a rather smooth, flat face of rock, of three to four yards high, and not worthy of a special name, as it does not present (except if ice-glazed) any difficulty whatever. Perhaps a certain reputation clings to it, because here a Swiss guide, one of the two well-known Laueners, slipped, and owed his safety to the rope alone, an incident referred to by Grohmann. From the "Böse Platte" to the top of Cristallo it is only a few minutes' pleasant and

¹ P. Grohmann, of. cil. p. 214.



PIZ POPENA, NORTH SIDE.

easy walk over the ridge. We arrived there at 7.10, having climbed quite leisurely.

On the summit of Cristallo, which is a sufficiently comfortable halting-place, we find, half hidden in the cairn, shut up in a tin case, a little book, the climber's record, which is a document full of interest. Other such books are on the Elferkofel and also on the Dreischusterspitze, in the Sexten Dolomites. There will be one, in the coming year, on the Croda da Lago; and it would be most desirable if the old and inconvenient system of bottles were given up for good and all, as by their means the notes are generally scattered, and it is often all one can do to get them out.¹

The view from Cristallo is magnificent, and has been too often and too well described for me to attempt it again in this unpretentious record. It is one of the most extensive and most rich in harmonious lines in the Dolomites. Especially worthy of note—because the nearest—are the imposing precipices of the Popena towards the Cristallo glacier, the symmetrical aiguilles of Marmarole towards the east and south-east; the mighty bastions of Sorapis to the south, with its north and northeast sides recently explored, the proud peak of Antelao, the beautiful summit of Pelmo, and, undu-

An appeal to the munificence and good will of the members of the Club Alpino, would surely be answered, and all the most frequented and interesting of our peaks furnished with their book, as is the case with the huts.

lating towards the west, the Ampezzo peaks, from the small and spiral Becco di Mezzodì to the unique Croda Rossa. Behind Pelmo and the Croda da Lago, in the far distance, can be seen the fanciful forms of the Primiero and San Martino Dolomites, the enormous Civetta and the majestic white mole of Marmolada. To the north rise the needles of the Birkenkofel, the Schwalbenkofel, and the Paternkofel, and the three incomparably fine Cime di Lavaredo (Drei Zinnen). north-east are the majestic Dolomites of Sexten, and glittering in a superb crown in the distance, the glaciers of the Oetzthal, Rieserferner, Zillerthal, Gross Glockner, Ortler, and others. Remarkable, too, are the precipitous declivities of Cristallo itself towards the north and west. ing us down from the summit rather by the east. the guides show us the huge crevasse in the glacier towards Val Fonda, where, on the 20th of August, 1888, the brave Michel Innerkofler sadly perished.1 Few guides were so beloved and regretted as Inner-Herr W. Eckerth, in his beautiful work koffer. "Die Gebirgs-Gruppe des Monte Cristallo," 2 and Herr T. W. Wundt in his splendid "Wanderungen

2 W. Eckerth, op. cit. p. 126, ct seq.

M. Innerkofler, when descending Cristallo by this side, with two Munich students, was crossing the crevasse which cuts the glacier diagonally. Suddenly a snow-bridge gave way, and the unfortunate guide was hurled on to the ice-ledge opposite, and, striking his head against it, was killed on the spot. His two companions escaped unhurt. See "Wanderungen in den Dolomiten," pp. 61, 62.

in den Ampezzaner Dolomiten," I have dedicated pages, vibrating with affection and regret, to the lamented hero of the Kleine Zinne and of so many other bold enterprises.

Whilst we hasten to take some photographs, because we see some characteristic columns of midday vapour rising slowly from the valley up the flanks of the mountain, we hear the joyful "yodles" of the mountaineering party who are coming up. It is amusing to watch the little figures as they mount the ridge. How small they look, as we ourselves must have done. It is a droll one, too, that group. The head of the family, a little "weitläufig," as Heine would have said, evidently "doing" the summit of Cristallo through sheer good-natured complacency, comes up leisurely enough, slowly but surely, his efforts cordially seconded by the guides. The younger lady, slim and agile, climbs well, and her mother as well cuts a brave enough figure. Picturesque also are the four guides, who are soon recognised by ours: Arcangelo Dibona, Zaccaria Pompanin, Giuseppe Colli, and the ever genial and merry Giovanni Barbaria, who makes the echoes of Cristallo resound with shrill Tyrolese "yodles." It is a lively scene. The train of climbers soon arrives at the top, welcomed with acclamations. All fraternise, German and Italian champagne goes round by turn, and every one in the party shows a cheerful face. Few occasions are so delightfully

T. Wundt, of. cit. p. 61, et seq.

exhilarating as these meetings on a mountain-top, under a glorious sun. How much the better we all feel for it, and how readily would we forgive anybody anything when we are thus on the heights!

After a long stay, we finally left, at 9.45, the summit of Cristallo, where we had now been for two hours and a half. These had passed like a flash. As the guides refused to accede to our desire to make the descent over the glacier to Schluderbach on account of the want of crampons, without which they were unwilling to make this descent (the glacier being this year in bad condition), we take the ordinary route down, followed, in about a quarter of an hour, by the other group. At eleven o'clock we are at the snowy gully under the Cristallo Pass. At last, after a delightful rest at the spring, we gaily descend the gravel path, and about midday we are back at the Tre Croci Hôtel, where several tourists, who had been informed that this was a "ladies' day" on Cristallo, had stationed themselves, full of curiosity, to await the arrival of the two caravans.

Madame Neumann was quite enthusiastic about her second ascent, and whilst resting, decided that the next one on her programme should be the Croda da Lago, with the far-famed difficulties of which she was very impatient to measure herself. At 4.30 we resumed our way to Cortina in a carriage, and after an hour's descent by the steep roadway, we were back again at the "Hôtel Faloria."



(From a photograph by E. J. Garwood, Esq.)

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The ascent of Cristallo is without doubt one of the most delightful and varied that can be made—and that with little fatigue and difficulty—in the Cortina group of peaks. It is within reach of even a novice in mountaineering, in spite of Baedeker pompously limiting it to "expert climbers with steady heads." The rocks are excellent and safe, with no particularly difficult passage. The "Böse Platte" is a mere nothing. It is also worth while to climb Cristallo from Schluderbach by the glacier, descending on the Tre Croci side, a route which continually affords wonderful glimpses of one of the most beautiful of the Dolomite regions.

CRODA DA LAGO (8,813 FEET).

THE Croda da Lago! A grand name for a grand mountain; a high-sounding name which strikes one as particularly imposing, though it is difficult to say why. I had read and heard much of this peak long before going there, how it was famed for being one of the most difficult in the Dolomites. Renowned guides and expert climbers had spoken of it with much respect, and a practised guide told me himself that he would not be very ready to go back on it.

For a long time the Croda da Lago had preserved intact its inviolability. The best guides in Ampezzo had vainly essayed it, and old Santo Siorpaes had finally declared to his comrade-in-arms, Utterson Kelso, that it was positively inaccessible; ¹ an opinion that Lacedelli and other experts shared. The efforts of two well-known German climbers, Carl Diener and August Böhm, from both the western and the eastern sides, were nullified by the determined resistance of the Croda, which, besides,

^{1 &}quot;Alpine Journal," vol. vi. p. 202.



ON THE CRODA DA LAGO. (From a protograph by Sugner L. Sinigaglia.)

avenged itself on that occasion by discharging volleys of stones on its daring explorers.

But in the meantime a very skilful guide, already famed for adventurous enterprises, such as the first ascent of the Kleine Zinne, had turned his attention to the Croda da Lago. This was Michel Innerkofler. At the beginning of July, 1884, he paid several visits to Cortina. Secretly, and under cover of night and mist, he went to the Federa Alp, and from there frequently reconnoitred the Croda. On the 19th of July of the same year, Baron Roland Eötvös, of Buda-Pesth, and Michel Innerkofler, who had been the former's companion in many first ascents, were the earliest to set foot on the northern peak of the Croda da Lago.

A few days after, Emil and Otto Zsigmondy arrived at Cortina, and, with their friend Köchlin, achieved (without guides) the second ascent of the Croda,² although, like Mr. T. W. Wall, who, with the guide Alessandro Lacedelli, of Cortina, made the third ascent ³ on the 6th of August of the same year, they did not scrupulously follow the way taken by the first climbers, and had, therefore, to struggle with more serious difficulties.

A few days after Mr. Wall, Professor Migotti, of

¹ Mr. J. Stafford Anderson had made another futile attempt in 1882 with the guides Santo Siorpaes and G. Ghedina. See "Jahrbuch," S. A. C., 1882, p. 480.

² E. Zsigmondy, "Im Hochgebirge," p. 200, et seq.

³ Mr. Wall has left an interesting account of this ascent in Lacedelli's "book."

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Czernowitz, with Michel Innerkofler, made the ascent of the Croda. Thus the haughty peak, for so many years held to be impregnable, was surmounted four times in about a month. The number of ascents then constantly increased. It is sufficient now to say that in this year (1893) they have reached a maximum of about thirty. So the Croda, if it still lacks nothing of its incontestable charm, has lost a little of that halo of difficulty which for so many years encircled it, and which even yet clings to it at Cortina.

Several lady-mountaineers have climbed the Croda. Among whom may be mentioned Fräulein M. Eckerth, who was the first to do so (August 6, 1887); Madame A. Helversen, wife of the enterprising Alpine climber, Dr. Hans Helversen (who discovered in 1890 a new and very hazardous route up the Kleine Zinne); Madame A. Menardi, the present amiable landlady of the "Hôtel Faloria," at Cortina; Madame D. Neumann, of Berlin (with whom I had the pleasure of making the ascent); and the well-known mountaineer, Madame J. Imminck, of Amsterdam, who must have a predilection for the Croda da Lago, since she has ascended it several times, and had, moreover, the courage to attempt it (and with success), in spite of the intense cold and the ice-glazed rocks, on the 10th of December, 1891, under the guidance of Antonio and Pictro Dimai, an undertaking that the guides declared to be the most

difficult and perilous that they had ever carried out.1

With all this, the beautiful peak has not, and will never, lose its fascination. There is something particularly noble and magnificent in its appearance which always exercises a powerful attraction, and the view of its formidable precipices from the Federa Alp will ever be one of the most splendid that the Dolomites afford. If the walls of the Croda towards the west are impregnability typified, the eastern face itself by which the ascent is effected, as seen from the Federa, that is to say, nearly from the foot, seems little more accessible than the other. And taking into consideration the conditions under which it was carried out, the mysterious legends that clung to the Croda, and the aspect of the precipice above mentioned, it can be affirmed that the enterprise of Michel Innerkofler was as daring in conception as in execution.

I was, therefore, very impatient to make the acquaintance of a peak that had been so much talked and written about. And equally so was Madame Neumann, who, having figured so wonderfully as an impromptu climber on the Torre di Averau and Cristallo, aspired to winning yet richer laurels on the Croda.

On the morning of the 7th of August, with T. Menardi, G. Barbaria, and G. Colli as guides (the

¹ T. Wundt, "Wanderungen in den Ampezzaner Dolomiten," p. 89, et seq.

latter one of the youngest of the Cortina guides, but already expert and worthy of recommendation), we left the "Hôtel Faloria" at 4.20. Part of the route which leads to the foot of the Croda has been already described. It is the same, nearly as far as the Federa Alp, as that which leads to the Forcella da Lago and to the Becco di Mezzodì. A little below Federa our footpath diverges to the right. and winds up, in and out, often lost in a steep wooded slope (scattered with troublesome little bushes and tree-trunks), till it reaches the base of another short but precipitous ridge which surmounts it, going up nearly in a straight line by a steep grassy gully. From the top of this ridge, continuing the ascent by scanty pasture-ground strewn with detritus, we soon come out on the great plateau, above which rises, imposingly, the bold rampart of the Croda da Lago. It has the form of a genuine wall of rock, terminating in a sharp, indented crest, which points direct from north to south, and culminates especially in the bifurcated northern peak (our goal), and in that to the south, a little higher, but almost neglected by climbers, because devoid of mountaineering interest.1

¹ The first ascent of this peak was accomplished on August 23, 1878, by Herren F, Fröschels and F. Silberstein, with Angelo and Pietro Dimai as guides. See "Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1878, p. 245. Oc. A. Z., 1890, p. 130. On August 27, 1895, the author, with Signor A. de Falkner and the guides, Z. Pompanin and G. Colli, succeeded in reaching, by the

A long belt of rock, fairly wide, surrounds the entire precipice on this side, sometimes underlining the base in sharp angles, sometimes forming steep cracks full of gravel, that have to be mounted and re-descended. Bending to the south, and following the capricious curves of this band, we arrive, finally, at a kind of platform, at the very foot of the enormous deep gully which leads direct to the ridge between the two peaks, and by which the ascent is It is the so-called "Rast-platz" of the Croda da Lago, and can be easily recognised, if not in any other way, by a kind of grotto formed at this point by the rocks. Here we stop for twenty minutes, and put on the comfortable "Kletterschuhe." It is besides worth the trouble of making a halt, to admire the outlook, most beautiful if somewhat restricted, over the Ampezzo peaks to the east, that is to say nearly in front of us, and especially on Cristallo and Sorapis, although the most interesting feature of all is the

western face (starting from the Valle di Formin), the ridge which, beginning at the Forcella da Lago, rises as far as the southern peak of the Croda. He then proceeded alone with the guides in a northerly direction, by a knife-edged arête of bad rock, which it was partly necessary to straddle over. He afterwards climbed the first spire to the south of the highest peak, and having let himself down from thence into the cleft below, from the latter he scaled the peak directly. He made the descent by the same way, and having reached the foot of the western face, returned to Cortina by the Forcella da Lago. The author hopes that the ascent by this side may often be repeated. The crossing of the arête, and the ascent from there to the summit, is alone enough to make it a tempting climb.

wall of the Croda, immediately over our heads. We are at the most favourable point for contemplating the vast and gloomy gully by which the ascent must be made, and which, seen thus closely, has a somewhat menacing air. Even Euringer owns that the way up the Croda, as seen from this point, cannot but appear very hazardous.

Of such precipices, apparently beset with great difficulties, that afterwards, on trial, prove non-existing, examples are not wanting in the Dolomites; but the Croda da Lago will always remain the most astounding and characteristic of them. In a more restricted field, these optical illusions are well known to Alpine photographers, who often take their companions in what are apparently most appalling positions, that make the hair stand on end to reflect on, but which are really nothing but the result of a clever piece of juggling.

Before resuming our way, we have time to notice, a few paces to the north, as if protecting the "Santuario" (sanctuary), a bold, sharp pinnacle, on the summit of which rise two gigantic blocks, symmetrically poised in what seems a most amazingly unstable equilibrium.²

Punctually at nine o'clock, after leaving behind

^{1 &}quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1885, n. 22.

² The guide Tobia Menardi, with a climber whose name I do not know, succeeded, while returning from the Croda, in accomplishing the short but arduous ascent of this curious spire.

all encumbering baggage, we attack with ardour the rocks, just above the "Rast-platz." We climb first diagonally for a few feet to the right, by easy ledges of rock; then surmounting a rock-stair of two or three yards, rather smooth but not difficult, we continue the scramble in nearly a straight line by easy terraces and two chimneys, which stimulate but do not over-tax our efforts, as far as a point where, by a sort of small platform, diverging to the left of the climber, in easy rock-bands, we gain the foot of the mauvais pas, of which we had heard so much. The section from this platform to the mauvais pas affords wonderfully fine views of the lofty precipices of the Croda.

This passage of the ascent is not so difficult as it has been described. We did not find it had at all. From a sort of chimney of grotto-like formation, by reason of an overhanging rock (the point, called by the Cortina guides "el buso," well seen from the Federa Alp), we have to ascend, bearing to the left, first by a large flat slab of rock. rounded at the top, from three to four yards high, with small and scanty finger-holds, then, cutting our way diagonally up the precipice (always towards the left) by narrow cornices and rather steep rock-faces. Such is the famous "traverse" of the Croda which, to tell the truth, we thought hardly justified its reputation for danger. It must be owned, indeed, that the slab has but few hand-holds, but what exist are excellent, and when the fingers are firmly

inserted, the climb is easy enough. With fresh snow or with "verglas" it is indeed another matter—as Madame Imminck can testify—but under normal conditions, above all if the guide is able to take a firm standing-point, there is no need to fear.

The traverse leads to the foot of the last long (though not steep) chimney which, as we scramble up it from left to right, conducts us, almost without our perceiving it, on to the unwelcome ridgeunwelcome because the ascent from the "Rastplatz" up to this point is so really exciting and so sure, that we would wish it to last still longer, whilst we know that from this ridge to the summit there is but a short stage. We stay a moment on the fork to admire the magnificent precipices of disintegrated rock towards the Val di Formin. Above us, a little to the north, soars the elegant furthest pinnacle of the Croda, which, from this side, shows an overhanging wall. From here we have to round the little terminal peak towards the west, by a slender, somewhat aerial traverse, not difficult, but requiring caution, because the rock, excellent so far, is in this place decidedly bad, and neither can the larger masses be depended upon, since they would but treacherously answer the grasp of the trusting climber. It was on this western face of the peak that Wundt, wishing to descend a little to take a photograph, almost lost his life by the sudden giving way of the rock on which he was seated.1

¹ Op. cit. pp. 117-18.

Turning round the wall towards the west, we attack the topmost pinnacle of the Croda, composed of vertical rock-faces, one above another, which afford an exciting scramble. By this means we arrive at the little depression between the two northerly points of the Croda, and, in a few paces are on the higher one, subdivided in turn by a col little more than a yard wide, which separates the two great masses of dolomite that constitute the summit, each not more than four yards square, and hence rather uncomfortable for a long stay,

It is 10.15; we have therefore been an hour and a quarter coming from the "Rast-platz."

Of the view from the top I cannot say anything, as the sky is mostly clouded, except along the southwest towards the curious Crepa di Formin, and along the north towards Tofana; but it is scarcely among the finest. We study with curiosity the notes (fairly numerous) enclosed in the bottles. Particularly interesting is the record left by Madame Imminck of her winter ascent, which is chronicled as "erschrecklich." We only find two ascents made by Italians, by members of the Milan branch of the Club Alpino; Aureggi and Pini, with Antonio Baroni and Pietro Dimai as guides, and Banda and Pugno with Zangiacomi. Ascents by many English, German, and Austrian mountaineers are recorded. and among the latter are some who have climbed the Croda more than once, Herr R. H. Schmitt for example. All this proves that, there being, so far

(August, 1893), no new way discovered up the Croda (except a partial variation of the route by Herr Schmitt himself), this peak exercises a particular fascination for cragsmen.

At 10.45 we begin the descent, and at about twelve o'clock we are once more at the "Rastplatz." After a rather long halt there, we resume our downward journey at 2.30, and, to vary it, and rather than pass again through Federa and Campo, we continue our way horizontally towards the north, under the high wall of the Croda, as far as the little saddle of Cordes that opens to the end of the north arête. From this small col, a vast stony gully, dominated by enormous overhanging walls, descends into the pretty green valley of Cordes, which forms a pleasant and romantic contrast to the rugged mountain scenery we have just left behind. On the way we find two delicious springs of fresh water, where we gladly indulge in a somewhat lengthy halt, on account of the excessive heat of the afternoon sun. We then resume our way down the little valley, which is a veritable garden, till we reach the Falzarego Road, just in front of the Pocòl Inn. From here we take a carriage to Cortina, where we arrive at 5.30, and where my brave lady companion is deservedly fêted. I remember that when we were on the summit she turned to me and said, "But where are the farfamed difficulties of the Croda?"

This was a really pertinent question. The Croda

da Lago is certainly not an easy mountain. an ascent which must be taken seriously and cautiously, but it does not justify its reputation for difficulty. This is also the opinion of mountaineers much better qualified to pronounce than myself as, for example, Messrs. Helversen, Wundt, and Schmitt. The Croda is very steep; but seen from the Federa Alp it appears much more so than it really is. Its rocks, with the exception of the last traverse under the summit, are excellent, and there are no falling stones. What difficulties there are to contend with are of short duration; moreover, they are not serious ones, and the guide always has good vantage-ground whereon to place himself. Far worse, indeed, is the Kleine Zinne, with a reputation for difficulty not inferior to that of the Croda, although some Cortina guides may maintain the contrary.

For the rest, many so-called difficulties in mountain-climbing become less formidable in course of time. The charge for guides, at first very high, is at present only sixteen florins. The regulations certainly prescribe two guides, but like many regulations in this world, they are not too rigorously observed at Cortina. And, truth to tell, for a first-rate climber one guide ought to suffice for the Croda, seeing that a second is really of little service. Herr Schmitt, who, however, by reason of his excessive daring, cannot serve, perhaps, as the best of judges, finds that even one is too many. He has

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achieved the ascent, contending, too, with ice-glazed rocks, all alone. Setting aside, however, the question of difficulty, the Croda da Lago is a splendid peak, and offers a magnificent climb which has only one fault, that of being too short.

" "Der Tourist," 1887, n. 14.



PELMO.

(From a photograph by Alessandro Cassarini, Bologna.)

PELMO (10,394 FEET).

A MONG the peaks of the Cadorine Dolomites, 1 Pelmo is, without doubt, one of the most popular and frequented, on account of its accessibility and the beauty and extent of its panorama. From the time when, on September 19, 1857, Ball made the first mountaineering ascent, which was, perhaps, also the first, absolutely speaking,1 and to which succeeded, on the 6th of September, 1863, that of Grohmann, with the guides Alessandro and Francesco Lacedelli and the brothers Zugliani, of Pescul,2 the ascents have gone on steadily increasing, especially since the erection of the comfortable Venezia Hut of the Italian Alpine Club, on the Colle di Rutorto (6,888 feet), just at the foot of the southern slopes of Pelmo. In fact, this summit bids fair to contest the pre-

¹ J. Ball, "A Guide to the Eastern Alps," London, 1879, p. 325.

² P. Grohmann, "Wanderungen in den Dolomiten," p. 126, cl seq.

eminence for popularity with its neighbouring rival

From San Vito to the Hut it takes about two hours and a half, and from here to the summit four hours of easy climbing by the south-east face of the mountain without any difficulty, especially since a formerly difficult bit, in the first part of the route generally followed, has been "toned down." On every other side Pelmo presents an apparently inaccessible face. Especially imposing is that which falls perpendicularly on to the Valle Fiorentina. And truth to tell, after the routes already mentioned of Ball and Grohmann,2 other new ones have not been found, except unimportant variations of the former. Such is that discovered by Giacin and Cesaletti, of San Vito, and adopted for the first time by Signori Ossi and Pampanini on the 10th of July, 1887,3 following a rock-belt which, like that of Ball's, cuts the south-east face of Pelmo, but notably much higher, beginning at the Forcella di Forca Rossa. Another more interesting variation completely avoids the belts of strata, and by

A winter ascent has also been made of Pelmo, in February, 1882, for the first time, we believe, by Lieutenant P. Paoletti. See "Rivista Mensile" of the Italian Alpine Club, 1882, p. 55.

[•] The route followed by Ball in his first ascent still remains the one preferred by climbers of Pelmo; the higher rockbelt, followed by Grohmann, is doubly long, although from a climbing as from a picturesque point of view, it is somewhat more interesting.

^{3 &}quot;Bollettino C. A. I.," 1879, p. 135.

a vertical chimney, over-run by water, leads direct to the higher terminal cirque of Pelmo. It seems that this last may be more difficult owing to a downfall in the rock.¹

On the 11th of August, my cousin, Giorgio Sinigaglia, of Milan, and I, with Giovanni Barbaria, of Cortina, and Charles Gorret as guides, left Cortina in a carriage at two o'clock, under a scorching sun, for San Vito. The road from San Vito to Cortina is attractive on account of the fine view it affords of the precipitous western flanks of Sorapis, of the noble pyramid of Antelao (much whiter than usual this year with snow), of the Croda da Lago, whose aspect undergoes strange changes as you near San Vito, and of the enormous bulk of Pelmo, which, on this side, shows a most unpromising face.

After a short stay at San Vito, at the simple but good and inexpensive, "Albergo dell'Antelao," we set out for the Hut at five o'clock. The tolerably good path which takes us there, after a five minutes' walk, leaves the high road to Pieve di Cadore on the left, and mounts in windings through pastures and pleasant woods as far as the Alpe or Malga Madiera. From here the footpath becomes steeper as far as the higher waste fields of Najarone, then we pursue our way up a gentle slope till we reach the Colle di Rutorto, between Monte Penna and Pelmo. Here, commanding a view of the two small valleys, and right in front

^{1 &}quot;Rivista Mensile," 1889, p. 358.

of the apparently formidable southern wall of Pelmo, stands the Venezia Hut.¹ It is very comfortable, substantially built, with excellent beds, and with hotel service done by a custodian in the summer season, and it would appear by its visitors' book to be one of the most frequented of those erected by our Club.

On the following morning, the 12th of August, taking our time, we leave the Refuge, a strong wind blowing, at four o'clock, with the guide Barbaria. Gorret, invalided, remains to enjoy the warm nook wherein he has ensconced himself. Diverging a little to the north-east with an easy climb over rock-detritus, we are shortly at the eastern extremity of the lower band of strata that cuts the imposing precipice at its full length, broken itself by steep gullies. This belt of rock is about a yard wide across the middle, and runs nearly horizontally along the precipice. here and there dominating fairly high rock-steps, making three sharp angles and penetrating deep narrow gullies among high and gloomy walls, till it comes out on a platform of rock that leads to the higher snow-layers of Pelmo. The belt is perfectly easy, however impracticable certain pieces of it may appear, seen at a distance. Then comes a point that was formerly interesting, a narrow cornice of rock, dominated by an over-hanging wall, which had to be traversed on hands and knees. Now that

¹ Erected by the Venetian branch of the Italian Alpine Club. See "Rivista Mensile," 1891, p. 337.

this particular passage is "simplified" (we do not discuss the reasonableness, itself open to question, of these "simplifications" for the benefit of families and young people), it has lost all its interest for the climber.

The belt being finished, we turn abruptly off to the north and begin a rather monotonous climb over terraces of detritus, where there runs the faint trace of a footpath within the wide cavity that opens all at once and leads by a gentle incline to the snow which crowns the three peaks of Pelmo. Of these the middle one is the highest; the others show from this side, especially the eastern peak, very steep and imposing precipices.

It must be confessed that the ascent is hence unenjoyable. The climber walks from this point to the summit, his hands in his pockets, and no opportunities are afforded the daring mountaineer of finding more interesting variations on the few rock-steps which break the monotony of the stone slope. Luckily for us, Barbaria, besides being one of the most esteemed guides of Cortina, is also a cheerful and genial companion, possessed of the ready Venetian wit, and this stage of the ascent is rendered less tiresome through his merry sallies and piquant anecdotes.

There is a deep wide extent of snow enclosed by the three bulwarks of rock. It forms a striking mountain landscape, which Wundt, in his book above quoted, has happily compared to a vast frozen crater. We mount this without difficulty, trending a little to the west till we reach the easily ascended rocky ridge, which, curving in a south-south-west and then easterly direction, leads to the highest peak which is crowned by a colossal cairn. We arrive there at 8.20, having climbed very slowly. The summit can also be gained by the short, and, in several places, easily accessible wall which rises above the mass of snow.

The view from the top of Pelmo has earned a well-deserved celebrity for its beauty and extent. In spite of somewhat threatening weather, we see a great part of it, especially the mountains towards Val Gardena, the Boà-Sella, Fassa, and Primiero peaks, as well as the interesting, but less known, chains of Agordino and Zoldano, some of the points of which, though not lofty, are decidedly tempting to the climber, the Sasso di Bosconero, for instance, and the Innerkoflerthurm, recently surmounted by Madame Imminck. Stupendous are the precipices of Pelmo itself towards Val Fiorentina, of which the green pastures and picturesque little white houses appear in striking contrast at a great depth below us.

We remain on the summit till 10.45, taking various negatives, but a storm which is gathering over the Ampezzo peaks warns us to make a speedy descent. In a short time we are on the snow, and at a quarter to twelve reach the commencement of the rock-belt. By 1.25 we are back at

the Venezia Hut. At three o'clock we resume our way down, and by five o'clock reach San Vito, where we drink to the memory of Pelmo in excellent sparkling Asti wine. Truly it is a beautiful peak, interesting alike on account of its fantastic geological formation and its panorama from the summit, which on a perfectly clear day must be wonderful. But from a climber's point of view it is devoid of interest, the ascent, in fact, being nothing more than an ordinary "constitutional."

TOFANA DI MEZZO (10,630 FEET), AND TOFANA DI FUORI (10,594 FEET).

THE Tofane group rises to the west of Cortina, between the Val di Fanes on the north, the Valle di Falzarego on the south, the Valle del Boite on the east, and the Valle di Travernanzes on the west. The loftiest peak is the Tofana di Mezzo, which is likewise the culminating point of the Ampezzo Dolomites. The beauty of the scenery, and the easiness of the ascent, much facilitated since the crection of a hut, cause the Tofana di Mezzo to be much oftener climbed than the two lower peaks, the Tofana di Razes (10.545 feet), and the Tofana di Fuori, although the latter are more attractive on account of their better individualised form.

Two ways lead to Tofana di Mezzo, the timehonoured route followed by Grohmann in his ascent on the 29th of August, 1863, with F. Lacedelli as guide, 1 by Pocòl, the Forcella di Tofana (where the hut is erected), the small western glacier and the northern crest; the other discovered on the 4th of September, 1881, by Herr H. Eissler with Arcan-

¹ P. Grohmann, op. cit. p. 85.

TOFANA DI MEZZO, from the Col retween Tofana di Mezzo and Tofana di Fuori. (From a photograph by Vittorio Sella, Biella.)

gelo Dimai, I direct from Cortina, by the glacier and the rocks of the steep eastern face, this way is to the mountaineer much more interesting than the first mentioned, which does not present the slightest difficulty. Perhaps it may be also possible to effect a way up the western face, mounting direct from the Hut, likewise one by the enormous jagged southern ridge. I know not, as a matter of fact, if such have been tried, but they must both be very interesting.

After the Tofana di Mezzo, the Tofana di Fuori (10,594 feet) is, of the three peaks, most frequently ascended. Ordinarily the two are accomplished in the same day—occasionally even the three—and are separated only by one hour of easy climbing. The Tofana di Fuori can be ascended from different sides: from the Valle Travernanzes by the west ridge; from Ospitale by the north-north-east crest; from the Hut, or direct from Cortina, either from the southern face towards the glacier looking on Tofana di Mezzo, by the southern ridge, or by the face towards Cortina, to the east of this ridge. The two last are decidedly the most agreeable ones.

The ascent of the Tofana di Razes (10,545 feet) is accomplished from the Hut by the north-east face, and to judge it from appearance it must be both fatiguing and uninteresting. The peak rises to the south-south-west, and shows, on the Falzarego side,

[&]quot; "Mittheilungen . . . Alpenvereins," 1882, p. 92.

one of the most imposing precipices to be seen in the Ampezzo Dolomites.

Returning to Cortina, after ten days of enforced absence, on the 25th of August I started at 3 p.m. for the Tofana Hut, accompanied by my cousin, and with T. Menardi and C. Gorret as guides. The narrow path which leads to the hut diverges from the Falzarego road, a little below where the latter forks off to Averau, and ascends, turning a little to the north, first by grassy slopes, then across what appeared the remains of a moraine, up the wide and desolate valley, bounded on the west by the walls of Tofana di Razes, and on the east by the southern spurs of Tofana di Mezzo.

As we mounted, the surrounding scenery became more and more rugged. We reached a point where the valley, contracting, appeared to be fenced in by a barricade of rocks of varied form and height, among which predominated sharp irregular projections, the largest of which is known as the Torre di Cianderau. The small footpath penetrates through the rocks, and quickly emerges on a desolate mountain amphitheatre, enclosed between the high walls of the Tofana di Razes and Tofana di Mezzo, where the Tofana Hut stands in a solitary spot, completely surrounded by multiform rock-needles, huge masses of stone, and the high walls of the Tofane, a deserted abode, enveloped in the imposing solitude.

The Hut (7,606 feet), erected in 1886 under the auspices of the Austro-German Alpine Club, is spacious and very well kept.

After an hour devoted to the consumption of an excellent dinner, we went outside, little disposed for poetry, but we were constrained to yield, then and there, to the fascination of a truly magnificent spectacle.

The full moon was just at this moment rising from the gilded margin of one of the majestic clouds that hung like a festoon across the summer sky. It suddenly illuminated, and covered with fantastic lights and shadows the obelisks, masses of rock, and the walls of the deep caldron in which the hut is placed. The two gigantic spurs of the Tofane formed a marvellous frame to the whole. It was a scene worthy of Goethe's "Brocken," and we remained a long time in ecstatic admiration, entirely regardless of the keen evening breeze.

On the next morning, the 26th, at 4.5, we leave the hut with weather uncertain and rather cold. Climbing in a somewhat northerly direction, first by a stone-strewn slope, and after by easy rockstairs and a wide gully full of detritus, we soon reach a small fork (Grohmann's "Forcella del Vallon Negro") whence the outlook is contracted, but characteristic, over ruinous terraced walls of rock, here and there streaked with snow, over the Tofana di Razes, the steep western precipices of

Tofana di Mezzo, and in the distance the uniformly reddish peaks of the Val di Fanes. We traverse, in a nearly horizontal line, the full length of the base of this side of Tofana, by the tolerably clear trace of a footpath, and are soon on the snowcovered glacier which forms the circular boundary of the two Tofane which are from this point very striking. We mount the glacier in an easterly direction towards the small fork or saddle between the two Tofane, then turning off sharply to the south, by a very short passage over the easy northern ridge, we arrive at the summit of Tofana di Mezzo at 6.35. (The top can also be reached by climbing straight up from the glacier, but this year it would cost us too much labour in cutting steps.)

The sun emerging just then victoriously from the clouds, compensates us for the cold we had felt on the glacier, where a cutting wind was blowing, quite exceptional for the Dolomites at this time of the year. The view, however, is at best only limited, and we regret much the absence of a clear sky.

At 7.50 we set out again. We descend as far as the fork between the two Tofane, then, varying a little the route generally followed for the Tofana di Fuori, we come down by a short cut towards the north on the Cortina side. By a fairly steep, but not difficult scramble over the short wall south of Tofana di Fuori, we gain the ridge that joins it to



TOFANA DI RAZES, FROM HUT NEAR CANPO FEDEROLE.

[From a photograph by Vittorio Stila, Birlia.]

the Tofana di Mezzo, and following this steadily, in a few minutes are at the summit (0.10).

Likely the ascent is possible by traversing the whole of this ridge from the saddle to the summit, and it ought to be a short but exciting climb. In any case these two ways are preferable to the old route by the side towards the glacier, or by the west ridge towards the Valle Travernanzes. It must be owned that Tofana di Fuori, with its beautiful snow-veiled cone, is finer than the central peak, and so close to it that it is well worth the trouble of a visit.

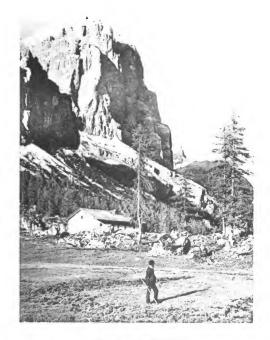
At 9.30 we leave the summit with the intention of redescending to the saddle, and hence by the rocks of the eastern face to strike down on to the glacier direct, whence we should soon gain the saddle that leads into the Val di Falzarego to Rumerlo, and so on, in a little time, to Cortina. But Menardi declares that the descent by the rocks on to the ice is, this year, quite impracticable, so we have to give up all idea of it.

In order not to retrace our steps we decide to descend from the other side on to the wide plateau towards the Valle del Boite. We first make our way down over the snow which lies under the summit, then, diverging a little to the northeast, we coast the ridge that juts out in that direction nearly as far as the opening of the Vallon Bianco above Peutelstein, over heaps of detritus and stones of all sizes and shapes, the latter interest-

ing perhaps to mineralogists, but traversed by the climber with sundry imprecations.

Afterwards we turn again eastwards to descend into one of the steep gullies, mostly impracticable, which furrow this side of Tofana di Fuori, and end below on the plain of Grava Longa. The one we have chosen is distinctly steep, and the rock, in more than one point very untrustworthy, demands caution, but after half an hour's exciting scramble down, we set foot once more on terra firma. No sooner are we there, however, than we give vent to bitter lamentations at the prospect before us, of crossing, namely, under a hot sun, the whole length of the interminable plateau of Grava Longa, which surrounds, on this side, the base of Tofana. During our passage over this plateau we go over so many stones that, in comparison with it, the Passo delle Sagnette (on the Monte Viso) and other celebrated "viæ crucis," would lose their reputation, Fortunately the passage is nearly horizontal, and, sooner or later, the end of it comes on to the small Forcella della Cesta, whence begins the pleasant descent towards Rumerlo. This runs through the idvllic shade of a larch-forest, and over a soft carpet of turf. Having arrived at the Rumerlo Alp, we indulge in a long rest, and do not reach Cortina till four o'clock.

To resume what has been said of the Tofane : the ascent of Tofana di Mezzo has not much attraction for the cragsman by the ordinary route,



TOFANA, FROM FALZAREGO.

(From a photograph by Alois Beer, Klagenfurt.)

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but it is neither tiresome nor fatiguing, as many describe it. The view from the top must be a fine one, though perhaps it is inferior to that from Pelmo.

Tofana di Fuori offers more attraction to a mountaineer, and the panorama is little more restricted than the other. The best arrangement would likely be to set out direct from Cortina, ascend Tofana di Mezzo by the glacier and the east face, go on from this peak to Tofana di Fuori by one of the abovementioned routes—south ridge, south face and ridge—from here down to the Hut by the usual way, and, if one is so inclined, to climb Tofana di Razes from the Hut, and return in the evening of the same day to Cortina.

DREISCHUSTERSPITZE (10,364 FEET).

(SEXTEN DOLOMITES.) 1

A MONG the various groups into which the Dolomites are divided, that of Sexten is undoubtedly one of the most important climbing centres. To this group, only to mention the principal ones, belong the summits of the Dreischusterspitze, Elfer, and Zwölfer, whose ascents, which can be accomplished from different sides, are in the highest degree interesting, whether from a picturesque or mountaineering standpoint. Emil Zsigmondy has devoted some of his most striking pages to them.²

¹ The Sexten group, although it is on Italian territory in places, is to us, or at least was up till very lately, little known even by description. In our climbing publications I have noticed only a summary by Brentari, and it was much later that the two carefully written and sensible papers on the routes over the rocks and by the Pass of Giralba to the Zwölferkofel appeared. Of the ascents made by Italian climbers, which up till now can be counted on one's fingers, more will be said auon.

^{2 &}quot;Im Hochgebirge," p. 137, cl seq.



(From a photograph by Anton Gratt, Innsbruck.)

It will not consequently be needless to put before the reader a little general information about the Sexten Valley and its mountains, referring for fuller details to the German publications on the subject, and in especial, for what regards general orography and routes, to Grohmann's "Wanderungen in den Dolomiten," already quoted; and for climbing technique, to Emil Zsigmondy's "Im Hochgebirge," and to the publications of the "Deutschen und Oesterreichischen Alpenvereins" and of the Austrian Alpine Club, particularly to the articles of Gustav Euringer, Carl Diener, and Madame H. Tauscher-Géduly, whom I shall often have occasion to quote.

The valley of Sexten opens out at Innichen, a prosperous-looking village above the Pusterthal railway line, between Toblach and Lienz. By this way, making Innichen your starting-point, you get up in less than two hours, passing through the chief town of Sexten, St. Veit, to Sexten-Moos; and from here to the Kreuzberg Pass or Passo di Monte Croce (4,339 feet—one hour and a half), a much-frequented road, which opens up communication between Sexten and the higher Italian valley of Comelico and with Auronzo.

At Moos a path diverges, leaving the road to Monte Croce on the left, and leads to the entrance of the Valle Fischelein, the most interesting to a climber. This is divided, at the foot of the sharp pyramid of the Einser, into the Valleys of Bachern

¹ See the account of the Zwölferkofel.

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and Altenstein. The western side of Valle Fischelein is formed by the magnificent group of the Dreischusterspitze, which juts out a little towards the north. The eastern side, which rises from the saddle which connects Monte Croce with the Rothwand, has its most remarkable peaks in the Rothwandspitze and the imposing bulk of the Elferkofel, behind which rises the huge snowcrowned mass of the Hochbrunnerschneide. To the south, the magnificent Zwölferkofel shuts in the Valle Fischelein and turns towards it, or, more accurately speaking, towards the Valley of Bachern, one of its most precipitous walls; whilst the other branch (Valle Altenstein) is closed by the modest Paternkofel. The Sexten Dolomites are bounded on the east by the Pass of Monte Croce, on the south by the Italian valleys of Marzon and Ansiei, on the west by that of Innerfeld: towards the north they look on to the Sextenthal itself. Many passes, which need not be mentioned here, form the means of communication between these different valleys,1

An expedition to the Sexten Dolomites was down in our mountaineering programme for the end of August, our chief aim being the ascent of the Dreischusterspitze, the Elferkofel (so far not achieved by Italian climbers), the Zwölferkofel,

¹ See especially G. Euringer: "Sextener Hochtouren" in the "Zeitschrift des Deutschen und Oesterreichischen Alpenvereins," 1882; and P. Grohmann, op. cil. pp. 41 and 54, et passim.

and, as a final climb, that of the Kleine Zinne or Piccola Cima di Lavaredo.

On the 28th of August, after having engaged, as well as our guide Menardi, the well-known guide, Pietro Dimai (of whom I shall often have occasion to speak), my cousin and I started for Sexten. Poor Gorret likewise followed us, but alas! with no mountaineering intentions, an aggravated attack of bronchitis forbidding him to climb.

The weather was cold and misty, and we had but little hope of it bettering. Never could we have believed that we should be able to initiate our little campaign, as afterwards happened, with a splendidly clear sky, and climb in five days the four peaks resolved upon.

In ten minutes by rail from Toblach (on the Pusterthal railway), beautifully situated, with a splendid hotel much frequented also by Italians, we were at Innichen, whence we drive up without loss of time to Sexten. Innichen, the head-quarters of the Hochpusterthal branch of the Austro-German Alpine Club, is a bright little village, situated at the foot of the indented chain of the Haunold (9,534 feet), of which the ascent from this side must be very interesting.

The road that leads to Sexten is rather narrow, but very carefully kept, and quite romantic in its scenery. You ascend by windings, on the left bank of the Sexten torrent, in the midst of thick pines which afford from time to time the most beautiful

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vistas; you pass on to Sommerer-Mühle (4,106 feet), a little cluster of houses at the entrance of the picturesque Innerfeld valley, surmounted in the distance by sharp, grey pinnacles, while by this time the furthest ridges of the imposing Dreischusterspitze, boldly outlined very high above the valley, are visible. The road here suddenly emerges on the wide and cultivated plateau of Sexten, with its rare beauty of outline and pretty white houses grouped round the campanile, with the green distance of Monte Croce to the south-east, and to the south the imposing chain of the jagged Rothwandspitze, Elfer, and Zwölfer.

The Rothwandspitze is the first summit to the south-east, a noble, triple-pointed peak. Separated by a stony hollow, sometimes full of snow, the beautiful peak of the Elfer rises to the southnearly contiguous to it, so that it came to be confused with it on the map of the G.M.K .-- and descends in a very steep precipice towards the Fischelein Valley. Beyond it, in the distance, are the wonderful obelisks of the Zwölfer, that great, weird mountain of which Zsigmondy writes: "There rises the magic vision of the Zwölfer, on which the wanderer gazes spellbound." A little more to the right is the steep cliff of the Oberbachernspitze, to the south-west the large flanks of the Gsellknoten, which hide the Dreischusterspitze from our sight. To the north, the only noteworthy feature is the soft curve of the Helm

ST. VEIT, SEXTEN.
(From a photograph by Amon Graft, Immsbruch.)

(7,983 feet), with its characteristic hut on the summit, the oft-visited Righi of the Hochpuster-thal.

We pass on without halting to St. Veit, the capital of the Sexten Valley, taking the Monte Croce road as far as Moos. From here another road diverges to the right, and leads to the hotel of Bad-Moos-our destination for this eveningmuch frequented, and charmingly situated in a larch-forest, just at the entrance of the picturesque Fischelein Valley. We arrive towards five o'clock. In the meantime, an unexpected change takes place in the heavens. The immense grey curtain is gradually and theatrically lifted from the distant ridges of Innichen, and displays the blue sky behind, which widens by degrees, and shows the shining little hut of the Helm. In a little time, amidst a calm, breezeless stillness, the murky veil is completely withdrawn, and we joyfully hail every appearance of a splendidly fine evening.

Towards ten o'clock Pietro Dimai, whose acquaintance we were impatient to make, arrived. He proved a manly type of the hardy mountaineer—more of him hereafter. We arrange for the ascent of the Dreischusterspitze on the morrow morning.

A little mountaineering history of this fine peak will not, perhaps, be out of place. The first to make the ascent, after an attempt brought to nought by bad weather, was Grohmann, who accomplished it on July 18, 1869—with Peter Salcher and Franz Innerkofler as guides—from Sexten by the Weisslahn and the eastern face, a route now generally followed.¹ Up till 1874, when the guides Michel and Johann Innerkofler achieved it, there were no other ascents, and only in the following year did a second climber, Herr Doctor Benedikt, of Vienna, make it with the Innerkoflers. Afterwards the ascents were more numerous, in consequence of the relatively greater facility for access to the other Sexten mountains, and of the Dreischusterspitze itself being the culminating peak of the group.

Emil Zsigmondy, with Schulz and Purtscheller, made vain attempts in 1884,2 as also did Georg Winkler (the bold cragsman who died on the Weisshorn), in 1887, to scale the very precipitous opposite side, which looks on to the Innerfeld Valley. The enterprise, which is always considered one of the most arduous in the Dolomites, was successfully achieved on August 1, 1888, by Herren R. H. Schmitt and S. Zilzer, with Pietro Dimai 3 as guide. The second ascent from this side was accomplished by Herren C. Diener and O. Fischer (Veit Innerkofler and J. Watschinger as guides), who furnished an accurate account of it,4 and confirmed the oft-expressed judgment on the difficulty

P. Grohmann, op. cit. p. 54, et seq.

² "Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1884, p. 219.

³ Ibid., 1888, n. 4.

^{4 &}quot;Oesterreichische Alpenzeitung," 1889, n. 276, p. 188; "Mittheilungen," 1883, n. 13, p. 159.

of this route. The ascent by this way was afterwards made several times, and once also without guides, by Herr A. von Krafft and a companion, on September 4, 1893.¹ Herr L. Norman-Neruda ² failed in an attempt to find an alternative to the route up this side, though we believed such to be possible. We ought to mention, besides, an ascent made by Herr R. H. Schmitt, by the Gsellknoten (9.033 feet), and the ridge which joins this to the mass of the Dreischusterspitze.³

At 4.25, on the morning of the 29th of August, favoured by splendid weather, we leave the hotel of Bad-Moos, after having there obtained a store of provisions for the four following days. We pursue our way over the opposite bank of the Fischelein torrent and climb for little more than half an hour through a beautiful larch-forest, where the footpath is constantly lost, as far as the head of the Weisslahngrabe, a large, stony, desolate valley which leads high up to the west, between the Dreischusterspitze and the Schusterthal.

Here we leave the Fischelein Valley, and, diverging to the right, have a toilsome climb up steep declivities, covered on the left with grass or scattered little bushes, till we reach a somewhat bare, gentle, grassy slope, where the line of vege-

¹ See "Oesterreichische Alpenzeitung," n. 379, p. 174.

Mittheilungen des Deutschen und Oesterreichischen
 Alpenvereins, 1889, n. 20, p. 260.
 Ibid., 1889, p. 141.

tation ends, and where two enormous blocks of stone are to be seen. It is the same spot where Grohmann halted for the night during his first ascent.¹ We arrive there at 6.20. The magnificent mass of the Dreischusterspitze is displayed from here in all its imposing sovereignty, with its enormous, heavy flanked, triple-crowned pyramid. Emil Zsigmondy says that, seen from this point, all hope of scaling this side seems impossible to the would-be climber. It certainly has the air of being very complex, and appears anything but safe.

At 6.40 we set out again, and begin the so-called "via crucis" of the Dreischusterspitze (harshly spoken of in all accounts handed down to us), an hour and a half's walk over fatiguing stretches of stones which seem unending. We mount up in a direct line for about half an hour, then diverge to the north up a steep gully of debris, and surmount some easy shelves of rock, till we get to a kind of small eminence which commands a fine view of the plain of Sexten.

From here, turning a little to the left, we coast, by the trace of a nearly horizontal path, the large belt of screes that runs along this side of the base of the Dreischusterspitze, as far as the foot of a rugged gully which, here and there covered with ice, and enclosed between steep walls, rises nearly as far as the summit in a westerly direc-

¹ Op. cit. pp. 55 and 55.

tion. We reach this point at eight o'clock and stay there till 8.45.

The gully by which we ascend is of an extraordinary size, most majestic and imposing to the climber. It affords us a very pleasant scramble, full of variety, nearly free from snow in this present year. The only drawback is the water from the ice, which in places runs over abundantly. We follow this gully as far as a steep chimney, where an overhanging rock forms a cavity by which an easy but interesting scramble is necessary. A few yards higher up we leave the gully, and take the rocks to the left.

Then begins a climb quite easy and somewhat uniform, zigzag up the gently inclined slope, by a few shelves of rock, easy belts and slabs, and some short chimneys, in the direction of the summit. The ascent is without interest, the rope useless. In order to find a really good scramble you must get to the foot of the last wall of rock, just under the peak. There you have a smooth. overhanging, and very narrow chimney, the vertical base of which, nearly without hand and foot-holds. renders the beginning of it rather awkward. This passage is, according to Grohmann, the worst point of the ascent. Here the rope becomes useful because the base of the chimney overhangs a steep ledge of rock. The chimney, the only point in the whole climb which is really of any interest to a cragsman, being surmounted, you diverge to the right till you reach the bottom of a steep face of rock, which it is necessary to go round, then to climb, in order to gain the extreme ridge; a somewhat exciting scramble on the whole. From the ridge, in a few paces towards the south, we gain the summit at 10.45, having climbed at our leisure.

The weather is very fine and warm. We remain more than an hour to enjoy the view, which is a celebrated one. Though not exactly panoramic. on account of the position of the mountain, the view from the Dreischusterspitze is particularly striking because of the characteristic contrast it affords between the soft meadows and green hills of the Sextenthal, and the sheaves of mountain spires on every other side. Especially striking are the nearest tapering pinnacles and precipitous walls of the Elferkofel, with the large Hochbrunnerschneide and the imposing Zwölferkofel. which are seen to the east and south-east, while the incomparable Drei Zinnen or Cime di Lavaredo, pointing straight as arrows, audaciously to the sky, are to be distinguished to the south. More to the west rise the neighbouring ridges, variously indented, of the Paternkofel, Schwabenalpkofel, and Haunold. Beyond the Drei Zinnen are the grand Ampezzo Dolomites . . . nor is this all, for the view embraces even the far-off glittering snows of the Zillerthal and Gross-Glockner, while the Hohe Tauern are from here particularly conspicuous. Striking indeed are the formidable preci-



DREI ZINNEN.

pices of the Dreischusterspitze towards the valley of Innerfeld. Pietro Dimai points them out to us with paternal pride, while he explains the first ascent from this side, made under his auspices, and which must be extremely well worth doing. Indeed, had our programme allowed, we should have very willingly attempted to come down by the Innerfeld side, hitherto unused in descending. We turn over the leaves of the visitors' book, hidden in the cairn, and very well furnished with signatures, but we find no record of Italian ascents, save one made by De Falkner.

At 11.45 we leave the summit, pursuing again the same route nearly to the top of the chimney described above. Dimai and I descend by the latter; my cousin, thinking he can make a more rapid descent, takes a chimney to the left with Menardi, a way, he asserts afterwards, much more steep and difficult. A little below the foot of the chimney we pick up poor Gorret, who, I should have mentioned, had been obliged to stay here. fatigue preventing him from going further. We make a nimble descent by the easy slope as far as the gully, whose descent renews the exciting scramble we had enjoyed going up; we only regret the shortness of it, for at 1.20 we are at the base of the rocks, where we stay half an hour.

We are satisfied with our climb, but a little disillusioned as to the difficulties that we hoped to find. We do not agree with Herr Max von Hees, who considers this peak not only the highest, but also the most interesting in the Sexten group, although it must be admitted that the Dreischusterspitze has a very imposing grandeur of its own.

The Zsigmondy expedition had the good fortune to witness a magnificent sunset down by the Weiss-Emil Zsigmondy describes it in such a masterly way that I must ask pardon for quoting a translation of his words. "We were," he says, "soon down over the Schusterflecken, and the Weisslahn. The Schuster had meanwhile donned a light transparent mantle of mist, and on the other side, above the Elfer, a sharp cone of clouds rested motionless. The sun for us had set, but all at once a magic hue lighted up the Elfer. The highest spires glowed a dazzling crimson. We turn to look at the Schuster. Dumb with admiration, we halt on the boulders. Luminous rays flashed between every pinnacle of the huge mass of the Schuster, so that the mountain seemed encircled by a radiant aureole of the most exquisite rosy tint. The pencils of rays dilated as they passed and spread a vaporous crown above its royal summit." 2

We had no such luck. On the contrary, the descent by the stones of the long and monotonous Weisslahn, under a burning sun, was anything but agreeable. Towards four o'clock, the heat having justified long and frequent halts, we were finally at

[&]quot; "Alpenfreund," 1893, n. 57, p. 751.

² Op. cit. p. 152.

the bottom of the tedious valley, and the picturesque Valle Fischelein stretched out once more before us. Here we stopped for more than half an hour, having likewise to make a long search for Pietro Dimai's jacket. Going up he had hid it behind a little bush, but to identify that bush was now no easy matter. We also needed a little refreshment after the twelve hours taken up by our expedition, to say nothing of the two more that lay before us for the walk to the Zsigmondy hut in the high Bachern Valley, whence we intended to take on the morrow advantage of the magnificent weather, and make the ascent of the Elferkofel.

At 4.20 we resume our journey, and, leaving to the left the road for Bad-Moos, we pursue ours up the Fischeleinthal, one of the most picturesque in the Dolomites.

After so many toilsome screes it is indeed pleasant to walk for more than half an hour on the beautiful plateau which the valley forms here as far as the foot of the steep precipice of the Einser, where the valleys of Altenstein and Bachern branch off respectively to the right and left.

We mount the Bachern valley by a tolerable path, which goes first along the right bank and afterwards along the left, up the rapid stream which runs in a narrow gorge through the valley, beyond which only a part of the very steep northern face of the Zwölfer, with its magnificent eastern peaks, can be seen. In proportion to our ascent to higher

ground, and above all, when we emerge from the gorge, the beauty of the view increases. Then suddenly appears the huge and extraordinary Zwölfer, from which it is impossible to remove one's eyes. Before it rises the strange and characteristic pyramid of the Hochleist (8,013 feet), which a lady-mountaineer, Madame Tauscher-Géduly, has happily defined as a grotesque caricature of the Matterhorn.¹ This deceptive mountain shows on this side a wall of giddy height and abruptness; on the south face, a gentle grassy incline stretches away nearly to the top.

To the east of the Zwölfer is the large and rounded bulk of the Hochbrunnerschneide, with its small glacier, unique in the Sexten group. The enormous rugged gully of the Innere Loch connects it with the Elfer, which rises more to the north-east, and whose summit is not visible from here.

On the way we are joined by a young German climber, who is also making direct for the Hut, en route for the Zwölfer. He is accompanied by Veit Innerkoffer, who, by the way, is the best guide in Sexten, a fine, genial fellow of robust physique, about forty, and who has reckoned already many new and difficult ascents to his score, most important of all, that of the Kleine Zinne from the north side, with Herr Doctor Helversen (1891). He gives valuable information respecting the Elfer, which, it seems, is this year harder than usual, especially as

¹ "Oesterreichische Alpenzeitung," xi. year, 1889, n. 272.

to the rock-climbing, and he tells us that the famous gully of ice on the Zwölfer (the Eisrinne) is now impracticable.

A toilsome ascent up a long, steep, grassy slope, brings us at last, a little before seven o'clock, to the Zsigmondy Hut, which is picturesquely situated (7,412 feet) on a solitary eminence just in front of the Zwölfer, in a remarkable hollow which gives as vivid an impression of "Weltvergessenheit" (to use the imposing German word) as one but rarely experiences.

The Hut, built in 1882 after plans by the architect Köchlin, is constructed entirely of wood, on a plinth of stone. It consists of two compartments, a first and smaller one, destined as a repository for wood, &c., and another which fulfils the combined functions of bedroom, dining-room, and kitchen, and is both spacious and comfortable. There is sleeping accommodation for eight persons in the first division: in another, smaller and separate from the first, and provided with a curtain, there is room for three. This last is especially set apart for ladies, but in it, for once, we snugly installed ourselves. In the May of this year (1893) the Hut, which is furnished with every comfort imaginable, even with cooking utensils, as well as a small store of drugs, was damaged and robbed, it is not known by whom. However, the Austrian Alpine Club restored it completely to its pristine order-as we found it-for the climbing season.

CLIMBING IN THE DOLOMITES.

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We pass a pleasant evening in company with our German colleague and the genial Innerkofler. At ten o'clock, having glanced out at the magnificent black mass of the Zwölfer, we go to bed. For my part, I wanted to sleep, but the dizzy pinnacles, the ice-couloirs, the precipitous walls which I had admired from the masterly pen of Compton in Zsigmondy's book, whirled in a fantastic dance before my eyes, and kept me a long time in a wakeful dreamy doze, till at last the impression left by those hard and interminable screes of the Dreischusterspitze got the better of Zsigmondy and Compton, and I fell fast asleep.

ELFERKOFEL (10,217 FEET).

NE mountain is like another." Michel Innerkofler once said to Zsigmondy, and Michel could be relied upon to know something about it. "but the Elfer and the Zwölfer alone are difficult; the Zwölfer on account of its great icecouloir, and the Elfer, because, just at the top, there is a remarkably hard bit to climb." This opinion of the most renowned and courageous guide in the Dolomites, together with Zsigmondy's account and the fact that I was the first Italian to climb the Elfer, made this ascent the most tempting item on our Sexten programme. Having recently read the account that Zsigmondy gives of the Elfer, and that Compton so admirably illustrates, my curiosity and impatience were wrought up to the highest pitch.

A word now of introduction for those who do not know this peak. The Elfer rises on the frontier line, a little to the east of the Zsigmondy Hut, to the south of the Rothwandspitze (9,144 feet), and to the north-north-east of the Zwölfer from which it is divided by half of the Hochbrunner-

schneide, and this the Pass of Giralba separates in turn from the Zwölfer. The summit of the Elfer is not visible from the above-mentioned hut. To the east the Elfer is on the Italian frontier; one bit of it, the most critical 'passage of the climb, is done actually on Italian territory.

We have to thank Michel Innerkofler for the first ascent of the Elfer, which he accomplished on the 21st of July, 1879. He was accompanied by his brother Johann and Baron Eötvös, but Johann, having received a blow on the head from a stone, had to wait on the first saddle with Baron Eötvös whilst Michel alone reached the summit. Four days later, Baron Eötvös, with Michel Innerkofler and Franz Happacher, was the first tourist to accomplish the ascent of this mountain, and on the 27th of July Doctor Fikeis, of Vienna, achieved it with Johann Innerkofler.1 The ascent was afterwards repeated several times, amongst other climbers, by the intrepid Hungarian lady-mountaineer, Madame Herminia Tauscher-Géduly,2 in 1881. But, generally speaking, the Elfer can only boast, up till now, of much fewer climbers than the Dreischusterspitze or the Zwölfer, as can be seen by the book on the summit. This is to be regretted, for the ascent of the Elfer is a splendid one, that of

" "Oesterreichische Alpenzeitung," xi. year, 1889, n. 272.

¹ For further details see G. Euringer: "Sextener Hochtouren" in the "Zeitschrift des Deutschen und Oesterreichischen Alpenvereins," 1882.

a typical great peak; it is extremely picturesque, and its difficulties are not so great as to restrict it only to a small number of the elect, above all since Herren Otto and Emil Zsigmondy and L. Purtscheller, without guides, on the 22nd of July, 1882, found a much easier route over the south-west face. Mr. E. T. Compton, who climbed the Elfer on the 11th of October, 1886, with Michel Innerkoffer, found a new way in the descent which afterwards became the ordinary line of ascent.1 This turns off, setting out from the Zsigmondy Hut, by the enormous caldron of rocks which unites the Elfer to the Hochbrunnerschneide, then traversing in a northerly direction the cliff which makes a background to this caldron, leads to the highest peak which rises a little to the north-west of the Hochbrunnerschneide,2

To Herr O. Schuster, of Dresden, was reserved the honour of discovering a new and difficult route, by the eastern face, on the 27th of July, 1892. Accompanied by the guides Veit Innerkofler, of Sexten, and J. Hausberger, of Mairhofen, he started from the Arzalp, under the Monte Croce Pass, bore on to the foot of the north-east flank, and after having vainly tried to reach direct from there the large and formidable ice-couloir that descends from

¹ See "Alpenfreund," 1891, p. 41.

² Op. cit. p. 155, ct seq. The Zsigmondy expedition had also essayed, though unsuccessfully, the ridge between the Rothwardspitze and the Elfer.

the topmost ridge of the Elfer on the east side, he climbed the rocks to the left of this gully, then, crossing it and passing to the right, followed its right arm more or less exactly as far as the abovementioned ridge, whence he shortly gained the top by the ordinary route. The couloir had here and there an incline of 58° to 60°, and in several places it was very difficult.1 This ascent was afterwards repeated by, among others, Herr Léon Treptow, with the guide Seppl Innerkofler, on the 28th of July, 1892, and by Madame Imminck with Antonio and Pietro Dimai, on the 1st of July. 1893. Several mountaineers, among whom were the two Zsigmondys, Schmitt, and Winkler, persisted in the attempt to reach the summit of the Elfer from the Anderstalpenscharte² by the north ridge. The problem, however, remains unsolved, This, succinctly, is the simple mountaineering record of the Elfer.

On the morning of the 30th of August we leave the Zsigmondy Hut at 6.20. Rapidly descending the grassy slope looking on to the Zwölfer as far as the small rushing stream, then bending again a little to the east and leaving on the right the track of a footpath which mounts by fatiguing stone slopes to the Santebühel Joch, and, successively, by a more gentle declivity, leads to

[&]quot; "Oesterreichische Alpenzeitung," 1893, n. 385, p. 247.

² "Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1892, p. 263.



ZWÖLFERKOFEL, NORTH FACE.
(From a photograph by Signor L. Sinigagita.)

the Pass of Giralba, we quickly traverse the wide level space that surrounds this side of the This point is well adapted for con-Zwölfer. templating-as we do with respect and admiration-the tremendous northern precipices of this magnificent mountain. From this examination it is easy to infer that, if the ascent by this side is perhaps not impossible, over the exceedingly steep and dangerous couloir of ice at the western extremity of its huge bulk-by which couloir another way already found on the eastern flank of the mountain is reached—the attempt at a direct ascent by the face must be, if not ineffectual, at least extremely hazardous, on account of falling stones, and the excessive steepness of the wall. Perhaps one of our vouthful and enterprising colleagues may visit the Sexten Dolomites, and not satisfied with merely admiring this side of the Zwölfer. will seek to scale it. He will find, however, that to succeed in this will be anything but an easy matter. In any case we would whisper to him, "If you respect your bones, beware!"

Pursuing our descent, we describe a semi-circle round the steep wall of the strange-looking Hochleist, that we leave on our right, and by a foot-track along a steep earthy slope, descend to the bed of the torrent, which we ford by means of great blocks of stone to gain the right bank. Then we remount another short slope of *débris* and gravel, which conducts us, by diverging a little to the north-east, on

to a level bit of ground strewn with a scanty growth of grass, whence the already oft-mentioned "Innere Loch" stretches out, into which we are going to penetrate.

The scenery is truly remarkable. To the west extend in a long chain, displaying the most diverse and irregular forms, the rugged peaks of the Oberbachernspitze and of the Einser as far as the magnificent pinnacles of the Dreischusterspitze. To the south the background is wholly filled up by the enormous Zwölfer. We have, as has been said, the "Innere Loch" on the east. Words are here How can we describe the utterly inexpressive. extraordinary beauty of this wild, rocky amphitheatre, a truly Dantesque bolgia unequalled, surely, in its sombre and desolate sublimity? We are before the gigantic portals of the Elfer, that great mysterious screen which will disclose the secrets of the mighty peak whose summit we cannot see. Two huge spurs of dark rock form, as it were, the folding-doors which are reared at equal distances from the Elfer and the Hochbrunnerschneide; the huge gully rises in the middle, as far as the wall, narrower and glittering with ice in the last part which penetrates underneath the rocks. steep bastion runs all round, which seems as if it would tenaciously defend the Elfer from all assault.

But the most remarkable feature, and the one which has always struck most forcibly all who have seen it, is the gigantic needle of reddish rock which towers dizzily to the left of the climber, and surpasses in precipitousness anything of the kind ever seen in this Dolomite group. "It is inclined so extravagantly forward," says Madame Tauscher-Géduly, "that it seems as if it were ever seeking to cast itself into the abyss beneath." It recalls the suggestive lines in King Lear:

"There is a cliff, whose high and bending head Looks fearfully in the confined deep."

We continue our way up the vast cleft, at first over tolerable débris, afterwards in the last part, over bare ice. Then we bear to the left of the curve till we reach the bottom of it (8.10 a.m.), where we rest a few minutes in a picturesque cavity, formed by the rampart of rock which we have to climb—this year's mawais pas—together with a prominent arch of ice.

The point for attacking the rocks of the Elfer is of great importance. Cragsmen who do not know the way will choose the rocks to the left, which are apparently better, but only to find themselves afterwards in serious difficulties. The actually weak point is, on the contrary, at the right-hand extremity of the gully, and consists of a precipitous rock-wall, terminating in a far from steep, but narrow chimney, which leads direct to the great terrace commanding the bastion. This wall is of very bad friable rock, and the hand-holds are nearly all very awkwardly

placed, so that the scramble up, by no means easy, requires great caution. It must be noted, however, that this stage of the climb may be very variable, since what one mountaineer has defined as simply a "gut gestuften steilen Fels," is maintained by Seppl Innerkofler to be the worst bit of the Elfer, and to us it certainly appeared anything but easy. The exceptional conditions under which this year's climbs are done have also to be reckoned with, but of these we had already been warned by Veit Innerkofler.

Neither was this bit to the taste of Gorret, who vociferated loudly from time to time, comparing—how aptly it is difficult to say—the rocks of the Dolomites with "his own" of Valtournanche.

The rock-wall surmounted, we keep a little towards the right by a narrow chimney close by, which affords a perfectly easy scramble, and brings us on to the great rock-terrace above mentioned. Then, diverging sharply to the north, we traverse it in its entirety to where it breaks off, and from hence we mount by an easy rock-step towards the right as far as another narrow chimney, not at all difficult, but requiring caution, owing again to the untrustworthiness of the rock. By this we reach first a small level space, where we find, as a grateful surprise, a rich

^{1 &}quot;Alpenfreund," 1893, n. 11, p. 753.

² "Oesterreichische Alpenzeitung," xi. year, 1889, n. 272, p. 139.

reservoir of perfectly fresh water, which overflows from the higher ring of the Elfer, forming in its descent three little basins similar in form. So inviting a spot, together with the heat, tempts us to indulge in a short rest on the natural rock-seats provided all around.

We then resume the ascent in a zigzag direction up the face of the mountain, by slabs of rock, sometimes steep, but not difficult, and by stratified belts and terraces, passing beyond a second and third spring, as far as where the declivity becomes still more gentle, and thus reach a vast slope of screes, fortunately not steep, which we mount, bending somewhat to the north-west in the direction of a small couloir, well seen from here. and dominated by a sharp peak, which is not, however, the summit of the Elfer. This is to be found yet further to the north-west behind a second spire, separated from the above mentioned by the long and precipitous ice-couloir which cleaves the face of the mountain so deeply towards the south.

We impatiently await the final difficulties, since we found nothing particularly interesting in attacking the aforesaid rocks. Certainly the scenery is most wonderful; our surroundings are of the wildest and grandest imaginable, as, in fact, is generally the case in the Sexten Dolomites.

We then thread the small, easy couloir which shortly brings us to the foot of the first peak.

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Here Gorret, having glanced at the remainder of the work, tells me that, in his opinion, the last section of the Elfer is not a climb for "a man with wife and family" to undertake, and that he "will not go on any further." We leave him liberty to act as he pleases, or rather, to not act, knowing that the poor fellow is really ill, and that this is the motive of his unwillingness to continue the ascent. Thereupon he proceeds to philosophically smoke his pipe, and we continue, keenly anxious to find ourselves confronted with the difficulties that several expert mountaineers have defined as serious.

From our small saddle we descend in a few steps directly into the underlying large ice-couloir, which separates the little col from the second peak. proudly towering to the north. Behind this peak we know the summit is to be found, and between the two the mauvais pas. Dimai, with an ice-axe found providentially at the foot of the spire, where it is permanently left-a new idea, and one in all such cases highly to be commended -vigorously sets about cutting steps in the very hard, compact ice. He makes all possible haste, as falling stones render the situation somewhat dangerous. In fact, a little while after our passage across many fall with a great noise into our couloir. We shortly reach a kind of little col to the north of the second peak - the same one that was climbed without difficulty by Doctor Lederer in 1880. From the col—a narrow tongue of snow—the view is limited, but very characteristic. About fifty yards more to the west the Elfer shows its extreme ridge, and a little further on, its summit.

To arrive there it is necessary first to round the base of the second peak, sticking the while, closely to the face of it, then, all grip failing us, to descend over the edge of the precipice, which on the Italian side falls from an appalling height on to a tremendous ice-couloir, whose base is lost sight of at a fearful depth below among the rocks. Traversing a piece of this ledge, we can, by bending again to the right and climbing a few yards, keep close to the extreme ridge, and hence easily gain the summit. This passage is short but interesting, and is perhaps more exciting than difficult, though the rocks are in very bad condition.

Having cautiously rounded the base of this rock-tower, we proceed by the above-mentioned ledge up the precipice, a short but dizzy traverse. Here is the critical point in the ascent. There are no reliable grips for the hands, and the extremely friable rock, mixed with snow, affords but a disagreeably uncertain footing; so that, taking into consideration what is below, this bit of the climb can be acknowledged as being decidedly bad, all the more so because the guide has no safe standpoint, and the rope is but of little use. So much

for this traverse, for which the conditions necessarily vary. We found them very unfavourable, as did also Zsigmondy, Euringer, Fikeis, and other eminent mountaineers. Madame Tauscher-Géduly maintains that all the difficulties of the Elfer are to be found condensed in this short section alone of its ascent.

Having accomplished the ledge and crawled up a slope of ice and disintegrated rock, we are soon on the ridge, and from here, by a few minutes' easy climbing, we gain the summit at 12.20. By reason of the great heat the sky is nearly completely hidden by a dense haze, and little is to be seen from our aerial observatory, but the intense excitement of that last stage of the ascent has quite indemnified us for our lost view. We have to content ourselves with admiring the stupendous precipices in which the Elfer falls on every side. We study the climbers' book with interest. It contains, relatively speaking, but few signatures, not a single Italian one amongst them.

At one o'clock we set out on our return journey. In a few minutes we are again on the ridge, and hence we achieve with needful caution the critical traverse. It is curious to note that Euringer found in this a piece that he defines as of "pikante Ueberwindung," where he was obliged to round a projecting rock by means only of his arms, his legs dangling the while over the precipice. We failed to find this place, and other climbers after

Euringer could nowhere identify it. A transformation has probably taken place, owing to the extraordinarily disintegrated state of the rock at this point.¹

Thus without incident we reach the small saddle again. Rapidly descending by the large ice-couloir, and climbing the opposite rocks, we get to the foot of the first peak, where we have left Gorret, and we find him safe and sound. Then we resume the rapid descent by the rock-gully, afterwards by the screes. Whilst traversing the latter, Dimai and I receive from our colleagues behind the unwelcome present of two lumps of rock, which come down perilously close to us. We are soon at the end of the stones and resume the way down the face of the mountain-much pleasanter to go down - often stopping near the fresh springs which are characteristic alike of the Elfer and of the neighbouring Hochbrunnerschneide. 3.30 we are at the last rock-step, which gave us a little trouble coming up, and affords some now in our descent. Especially hard is it for Dimai, who is the last to come down and has not a good standpoint where he can fix the double rope a system that he is much in favour of, and of which he avails himself with tact and ability. At four o'clock we are all assembled again at the

¹ It was here that, whilst coming down from the summit, Emil Zsigmondy made a perilous slip. See "Im Hochgebirge," *loc. cit.*

foot of the rocks, after having been let down successively with necessary caution. From here we descend quickly by the glacier, then by the debris of the "Innere Loch," till we get to the tract of level ground, where we make a long halt and take some photographs. Towards 5.15 we resume our way, taking again the same easy route as in the morning, and at about six o'clock are back again at the Zsigmondy Hut, well content with our day's work.

The ascent of the Elfer will long remain impressed on my memory as one of the most satisfactory I have ever made -not excepting some of the greatest Alpine peaks-so overwhelmingly grand and imposing is the scenery that surrounds the climber. As far as the difficulties are concerned, they are reduced to the beginning of the rock-climbing and the last traverse under the summit-difficulties, as it has been said, that vary according to the ever-changing conditions of the mountain, especially in what regards the first mentioned; as to the last mentioned, the traverse, the estimates of nearly all the climbers of the Elfer agree. The rest, from a climber's point of view, offers nothing else worthy of special mention.

Halts included, and the mountain supposed in good condition, the ascent ought not to take more than four hours.



ZWÖLFERKOFEL, SOUTH-WEST FACE.

(From a photograph by Signor L. Sinigagita.)

ZWÖLFERKOFEL (10,118 FEET).

THE Zwölferkofel is one of the most beautiful peaks, not only of the Sexten group, but of all the Dolomites. From whatever point we view this splendid mountain, its magnificently bold outline is equally imposing, and if mountains are, as a German poet has declared, the most worthy churches erected to the glory of God, then is the Zwölfer indeed the true cathedral of the Dolomite region. In a line with the Elferkofel, it is situated a little more to the south-west on the frontier line between Austria and Italy. The northern face alone looks on to the Austrian valley of Sexten. whilst on every other side it is bounded by Italian territory-that is to say, on the east by Val Giralba, on the south by Val Cengia, and on the west by the Pian di Cavallo.

The first ascent of the Zwölfer was accomplished on the 28th of September, 1874, by the guides

¹ The Italian name of Cima Dodici has met with little favour. On this point see the article by Cainer quoted later.

Michel and Johann Innerkofler. They had already the day before vainly attempted the eastern face Now, however, they succeeded in discovering a route up the south-west side by the famous ice-couloir, and for several years this was the ordinary way up the Zwölfer. Other routes were found successively much later; they shall be described here at length, in order to complete the mountaineer's record of the Zwölfer.

1. By the south-west face and the ice-couloir First ascent, Michel and J. Inner-(Eisrinne). kofler, September 28, 1874. The two guides mounted from the Bacheruthal to the Santebühel loch, and rounded, by easy belts of strata, the base of the south-west face as far as a point where there is a breach. Then, ascending in a straight line by tolerably easy rocks, they reached the mouth of the ice-couloir (Eisrinne) which cleaves all this side of the Zwölfer, and, following almost without deviation its length, they came out on a little col to the south, between the two highest peaks, Bending then northwards by a steep chimney of rock, they gained from thence the summit by easy stone slopes. The first climber's ascent of the Zwölfer was subsequently achieved on the 21st of July, 1877, by Baron Eötvös with the two Innerkoflers above named. Before this three other expeditions had been vainly essayed.

Next came the ascents of Doctor Porges with S. Siorpaes and A. Dimai (1878); of Schreder with the Innerkoflers (1879); of Euringer with J. Innerkofler (1881); and of Emil and Otto Zsigmondy and L. Purtscheller, without guides (1882). Of this last there is a stirring account in Zsigmondy's book, ¹

From 1882 to 1887 all the ascents of the Zwölfer were made from this side. Herr C. Stedefeld, of Prague, with the brothers Innerkofler, found, on the 24th of July, 1883, an easier but longer course for the last stage. Having reached the top of the icecouloir, he bent over the eastern flank towards Val Giralba, and, by following a large belt of strata, gained the summit from this side.

The climb by the Eisrinne is described as a fine one and highly interesting, but as presenting two inconveniences—first, the serious danger of falling stones, frankly admitted, for example, by the Zsigmondys, who had personal experience of it, and by another authority, Schulz, who affirms this ascent to be more perilous than that of Monte Rosa from Macugnaga²: secondly, the frequently impracticable nature of the ice-couloir, so that, if this is impossible, all way to the Zwölfer is blocked. The necessity for finding another, and possibly a more secure route, was plainly felt. In the one year, 1887, by a strange coincidence, two entirely different new ways were discovered.

¹ Oh, cit, p. 168, cl seq.

^{2 ii} Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1880, n. 3, p. 33.

2. From Val Giralba, by the castern face. ascent, R. H. Schmitt and G. Winkler, August 29, 1887.1 Doctor Julius Kugy, with Pacifico Orsolina and G. Pordon 2 as guides, had made futile attempts at the ascent from this side in 1885, and in 1886 Herr Otto Fischer, with Michel Innerkofler, tried the same route. Both expeditions, however, failed, owing to the bad weather. Herren Schmitt and Winkler, making the last shepherd's hut of Val Giralba their starting-point, reached the extremity of the valley and attacked the eastern flank of the south-east ridge. They arrived, after various deviations, at the foot of a characteristic rampart of rock united to the principal bulk by a small saddle. Having scaled this rampart and descended on to the fork, they began climbing up the rugged walls and cornices of the south-east face, and found themselves on the secondary peak of the Zwölfer, separated from the higher one by a sort of little fork, the very same whereon the Eisrinne, on the south-west side, terminates. Descending this fork with difficulty, by a steep couloir full of snow, they reached the summit from here by the ordinary way. The Schmitt-Winkler route is described by the author as very picturesque, and as presenting, relatively speaking, but little difficulty. Up till

² "Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1886, n. 9, pp. 104–105.

^{1 &}quot;Oesterreichische Alpenzeitung," 1887, n. 243, pp. 217-218; "Tourist," vol. xx. n. 5.

now, however, it has been but little followed, either because of the long detour that would be necessary to get from the Zsigmondy Hut to the Giralba Pass in order to reach the foot of the rocks on the south-east face, or because it so chanced that another route, equally safe and much more attractive, was discovered the same year.

3. By the rocks of the south-west wall, avoiding the Eisrinne. First ascent, Messrs, Simon and J. Reichl, with Michel and Johann Innerkofler as guides, September 6, 1887.² These climbers solved the problem in the happiest manner, finding an extremely interesting route, not too difficult and relatively free from stone-falls, to the north of the Eisrinne, which was thus completely avoided, emerging on the col already mentioned, where the Eisrinne terminates, and thence climbing to the top by the usual way. On the 23rd of September of the same year Herr Fritz Drasch 3 discovered a rather difficult variation of this route, by keeping closer to the ice-couloir.

The Reichl-Simon route was much valued by the climbing world. Among those who followed it in 1886 were Doctor Roessler with Veit Inner-

⁴ The Schmitt-Winkler route would acquire interest by the erection of a hut at the base of the rocks, on the Italian side. We hope it may soon be thought of!

^{2 &}quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1888, n. 2, p. 18; "Oesterreichische Alpenzeitung," 1887, n. 32.

^{3 &}quot;Oesterreichische Alpenzeitung," 1888, n. 240.

kofler; Madame Tauscher-Géduly, Messrs. B. Tauscher and L. Norman-Neruda, with Veit and Seppl Innerkofler and Peter Reinstadler¹; and Doctor Carl Diener, who has given a very accurate account of it.² The Drasch route also was taken by Herren Friedmann, Schmitt, and von Kraft in 1888, but it did not meet with so much favour as the other, by which numerous ascents were made in subsequent years, and which has now nearly supplanted the old way by the Eisrinne. Our own ascent was by this Reichl-Simon way.

4. By the Pass of Giralba. First ascent. Doctor H. Helversen and Doctor Witlaczil, with Seppl and Veit Innerkofler as guides, July 30, 1890.3 Setting out from the Zsigmondy Hut, they bore on over the Giralba Pass, whence they gained, by a steep ice-couloir, the col between the Kleiner Zwölfer and the Zwölfer itself. From here, keeping to the northern flank of a large ridge which leads direct on to the summit, they reached the latter without serious difficulty, and without making use of the rope. Doctor Helversen describes this route as short, easy, and very interesting on account of its picturesqueness, and from this point of view he prefers it to that by the south-west

[&]quot;Oesterreichische Alpenzeitung," 1889, n. 285, p. 302.

³ Ibid., 1889, n. 285, pp. 301–306. See also the well-written article by Cainer in the "Rivista Mensile," 1890, n. 3, p. 106.

^{3 &}quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1891, pp. 71-73.

rocks. He advises, however, that the Zwölfer be traversed by both routes.

Thus has the Zwölfer, up till now, been ascended by four different routes. There ought still to remain one to be tried—as we have had occasion to remark—by the northern face, which falls in a tremendous precipice to the valley of Bachern. Doctor Carl Diener, an incontestable authority in all mountaineering matters, observes in his article already quoted that the possibility of such a way does not seem to be excluded. Herr Drasch is also of the same opinion, though asserting that such a way must needs be dangerous on account of the stones.²

As I have said, it is to be hoped some enterprising cragsman may succeed in the venture, but it will be a hazardous undertaking, and, technically considered, one of the hardest climbs imaginable.

Two words more of mention for the Italian climbers who preceded us up the Zwölfer. The first was Signor Dario Franco, of Leghorn, with P. Orsolina and G. Pordon as guides, by the old way of the Eisrinne, on the 5th of September, 1888,3 Second comes Signor G. Levi, of Florence, with G. Pordon as guide, by the Reichl-Simon route

¹ See the article by Cainer in the "Rivista Mensile," 1891, n. 11, pp. 387-389.

² Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1889, n. 21, p. 257.

^{3 &}quot;Rivista Mensile," 1889, n. 8, p. 113.

It would seem that this year a veritable movement has taken place among Italian climbers towards the wonderful Sexten Dolomites. Let us hope that this may extend not only to the other peaks of this group, but to all the Dolomites.

I have expatiated at some length on these various routes for the ascent of the Zwölfer, because this mountain, which on three sides fronts Italy, ought to be a genuine attraction for Italian climbers who may hither resort from over the frontier.

On the morning following our ascent of the Elfer (August 31st) the weather had changed and promised rain. The idea of setting out again on our return after such a *fiasco* annoyed us much, as we had so well inaugurated our Sexten campaign. The ascent of the Zwölfer, moreover, not being a long one, we delayed our departure till Dimai had detected signs of more favourable weather.

At 7.30 we quitted the Hut. Having once more descended the grassy slope towards the Zwölfer, and leaving on our left the path for the Pass of Giralba and the Elfer, we began to climb in a southern direction, by a faintly-marked path,

^{1 &}quot;Rivista Mensile," 1893, n. 7, p. 292.

² Ibid., 1893, n. 9, p. 210.

up the fatiguing gravel slope which leads on to the Santebühel Joch, the well-defined col to the west of the Zwölfer.

At 8.20 we were on the eminence (8,226 feet) between the Zwölfer and the Santebühel (8,547 feet), in a position that commands a characteristically fine view over the Dolomites of Misurina and Ampezzo. Particularly interesting are the Drei Zinnen, which from here seem all massed together, the Kleine Zinne entirely losing its bold outline. To the right, towards the Drei Zinnen, extends the so-called Pian di Cavallo (Rossleite). To the left stretch out towards Val Cengia the belts of screes that furrow the base of this side of the Zwölfer. which, soon broken, end in precipitous walls that fall into the valley below. The Zwölfer itself shows, just under the hill, a perfect wall of vertical and, for the most part, overhanging rock, with small horizontal belts of strata. On the south alone is the shadow of a vast cleft visible, which appears to fissure the whole of the mountain from this side, and whose base is hidden. The precipice to the south of this cleft has the appearance of being still worse than that which immediately rises over us.

From the col above-mentioned a well-defined belt of strata runs towards the south, which, surrounding the south-west face, allows of access as far as where, interrupted by a vertical wall which

¹ The Italian name of Forcella Cengia is but little used.

falls towards Val Cengia, it diverges to the southeast over the precipice, and where, by a short scramble, the base of the Eisrinne is gained. This band of rock affords quite an easy walk. We arrive in a few minutes at a small platform, to the left of a narrow couloir, at the foot of a shelf of seemingly good rock. The extremity of the Eisrinne is to be found a little higher up on our right, and for a little way the route is the same for the climber by the Eisrinne as for one who makes the ascent by the rocks.

After a short halt we begin the ascent. The commencement is quite free from difficulty. We mount in a zig-zag direction by some ledges of rock directly above us, and by short small chimneys. then bend somewhat to the north towards a great chimney on the left, where we find an interesting scramble over large, steep slabs, with excellent finger-grasps,1 Here was fixed, by whom we cannot say, a nail, now somewhat loose, the necessity for which it is not easy to understand, except perhaps in case of the rocks being glazed by ice. In any case, as now placed, no confidence must be put in it. This passage is characteristically overshadowed by a rock. Climbing the rock-face, bending a little to the right, and by a series of little rock shelves and couloirs that present no difficulty, then bearing a little towards the

¹ Here it was, we believe, that Mr. Utterson Kelso ran serious risk through making a slip,

Eisrinne—which is to be seen at intervals, covered with bare ice all broken in pieces and evidently impracticable—we come on to a vast terrace of rock, overlooked by a high wall absolutely vertical, which seems to bar the way. A little more to the left, at about a third of the height of this wall, is another rocky screen likewise vertical, about forty-five yards high, which curves distinctly to the left. This also appears a serious obstacle to our progress.

Diverging to the left, we bear on to the base of this screen, which leads us to a higher rock-stage. We are at the foot of the passage that, in Doctor Diener's opinion, is the worst bit of the whole ascent. Trusting to bad, awkwardly placed finger-holes, we turn around the screen of rock towards the left as far as the most prominent part of the curve. Then we climb straight up, not without difficulty, by the vertical rock-wall of which the hand-holes are anything but convenient, especially in the upper part of it, since the wall ends above a perfectly smooth, flat rock-face, and it is needful to stretch out one's arms at full length in order to keep a decisive grip. Certainly had Tartarin 1 come here he would have warmly protested against the local authorities not providing for the inconvenience by placing suitable hand-holds. We are shortly all together again above this passage, which is not after all so bad. It has indeed the drawback that where the finger-grips are secure,

¹ Of Tarascon, in Alph. Daudet's novel.

they are inconvenient to get at, and where they are easy to get at they are unsafe.

We climb the rock-band diagonally, by steep but easy slabs towards the left, then diverging again to the right over a narrow cornice and descending a few paces to the left, we at last gain the adjacent couloir at the top, and climb a part of Leaving it almost immediately and rounding the opposite rocks we renew our climb towards the right, up a steep but not difficult wall of rock. Continuing our way by a well-marked ledge to the right, we are at the foot of the long chimney which Diener justly pronounces to be the most characteristic bit of the whole ascent. And truly it is a delightful scramble that we have up the steep, narrow chimney, like a "Jacob's ladder," poised in mid-air. The space is too restricted to admit of climbing it from within, one must consequently keep for the most part on the slender arête If not, the cragsman may be in the same predicament as my cousin, who found himself driven into so narrow a hole that it was only with difficulty and by violent twisting and wrenching that he got out. I, who am of slighter build, should probably have come off better.

From the top of the chimney we are soon on a wide belt of *débris*, which surrounds the last stretch of this wall, from here insurmountable. Then we trend southwards by the belt which is quite passable and runs, always narrowing, as far as the angle of the wall which we are obliged to skirt by a curious though easy passage, crawling up over a narrow cornice dominated by the rock above it. This bit recalls a similar one on Pelmo. emerge thus on a sort of large platform, one of the most characteristic features of the Zwölfer. To the south towers proudly the steep rampart of the lesser peak-the same that the Schmitt-Winkler party ascended going from the east side. To the north opens a wide steep cleft, formed by a double chimney, by which the highest peak is soon reached. Between the two peaks there is a kind of col whence the view towards the south-east is contracted but picturesque. The Eisrinne's mysterious depths yawn to the south-south-west.

After a brief halt we set out again for the summit, beginning our climb above the mouth of the gully formed by the double chinney. Of the two chimneys that to the right is usually chosen. My cousin and Menardi climbed by this one; Dimai and I mounted by the one on the left, which is much more inviting to the cragsman, on account of its steepness; the rocks are very good, and provide a capital scramble without noteworthy difficulties. We all met at the top of the chimneys nearly at the same time. From here to the summit which rises a little more to the north, it is an easy walk by gently sloping screes; we arrive there at 12.15.

In the meanwhile the sky had cleared in a remarkably short time, especially to the east.

We were thus enabled to enjoy one of the most interesting views imaginable over the Elfer and Hochbrunnerschneide, and the peaks which overlook the valley of Giralba, to the green meadows with which they formed a striking contrast. In the direction of Ampezzo a violent storm was raging, between Cristallo and the Drei Zinnen.

On the top of the Zwölfer we found several notes, among which was the record left by Signor G. Levi, of Florence, who, with Pordon as guide, had preceded us in the month of July over the same track.

At 1.40, seeing that the storm was getting nearer to us, we set out on our return, hastening our descent as much as we could. But we were scarcely at the base of the double chimney before the sleet had begun to fall, and such was the rapidity with which the tempest gathered over us. that when we arrived at the foot of the second long chimney, the rocks were already white with the thickly-falling snow mixed with rain. In fact, all the steep mountain-side was quite over-run with copious rivulets, which flowed down the rocks in anything but pleasant fashion, and often while crawling over the smooth rock-slabs, or letting ourselves down by the chimneys, the water dripped into our necks. The rocks of the Zwölfer must be admitted to be excellent, since, in spite of their being deluged with water, we did not find any extraordinary difficulties in the descent.

At 3.20 we were at the foot of the rocks, and, descending precipitately by the belt of rock and steep stone-slopes of the Santebühel, at about four o'clock we were back at the Zsigmondy Hut, all wet through, but enthusiastic over the Zwölfer. At the Hut we found the faithful Gorret—we had dispatched him to Bad-Moos to renew our stock of provisions. Seeing us coming, he had prepared some delicious tea. For my part, as I had noticed from the gravel slope coming down that the Hut remained closed, and our "yodles" unanswered, I was beginning to think ill of poor Gorret, and was preparing to receive him in energetic Valtournanche fashion, likely with his own classical expression, "Bigre de pifre dou diablo!"

We drank our tea, changed our clothes, and were soon completely dry. This last, I may remark, was likewise the condition of our purses, owing to the sumptuous way in which the catering from Bad-Moos had been carried out.

There are few climbs, even taking into consideration many of our most renowned rocky peaks, that are as enjoyable as that afforded by the Zwölfer. Unlike the Dreischusterspitze and the Elfer, here the interest never flags during the whole of the ascent. The most exciting bits follow one another without a break, each different from the last, over rocks steep indeed, but excellently solid and not particularly dangerous from stone-falls.

KLEINE ZINNE.

(PICCOLA CIMA DI LAVAREDO. 9.449 FEET.)

H AD the weather not been so unpropitious during our descent from the Zwölfer, we should have been enabled to go overnight to the Drei Zinnen Hut on the Toblinger Riedel, which is about three hours' journey from the foot of the Zwölfer. Indeed, I was secretly congratulating myself at being able to do the Kleine Zinne on the morrow, thus completing in four days the ascent of the four peaks that were down on our programme, and returning the same evening to Cortina. Instead, as has been related, we went down again to the Zsigmondy Hut, to which, moreover, we now felt quite attached. quite an atmosphere of home which makes it particularly pleasant, and the magnificent solitude which surrounds it has of itself a most powerful fascination.

It was then with some regret that on the morrow we left the Hut, not indeed before one o'clock, wishing, as we lay stretched at full length on the



KLEINE ZINNE (TOWARDS THE SOUTH), (From a pholograph by F. Moser, Betzen.)

To now Juge title

grass, to enjoy for a whole morning the fresh and balmy Alpine air, and the incomparable view of the Zwölfer. We set out most unwillingly, for these journeys from one hut to another, after ascents, are apt to be decidedly tame, and we looked forward to a tedious three hours. As a matter of fact, it was just the contrary, so that we had no need to complain of not having remained at the Zsigmondy Hut. Indeed the walk from there to the Toblinger Riedel is one of the most attractive to be found in this region of the Dolomites, on account of the variety, richness, and beauty of the views that it continually affords of the Sexten group, such, for example, as those over Misurina and Ampezzo, and the more distant mountains of Cadore.

From the Hut you turn westwards—leaving to the south-west the way to the Santebühel Joch and the Zwölfer—by an easily-traversed grassy valley, as far as a small saddle, splendidly situated to the west of the Santebühel, and offering a wonderful view of the vast mountain-chain, from the Rothwandspitze and the Elfer to the Hochbrunnerschneide and the imposing dome of the Zwölfer. We can now admire the magnificent wall that we had scaled the first day. The view to the south-south-west likewise is fine, towards the jagged peaks of the Cadini di Misurina, and the beautiful crests of the Popena, Cristallo, and Sorapis, behind which glitters the noble

pyramid of Antelao. To the south-west, pointing like arrows to the sky, are those remarkable and unique pinnacles, the Drei Zinnen. In a more westerly direction is an intricate mass of mountains, conspicuous among which are the Schwalbenkofel and the Morgenalpkofel. To the north emerge the imposing Dreischusterspitze and the parallel chain of the Haunold, of the Birkenkofel, and of the Hochebenkofel, with its bizarre crenellated ridges.

From the above-mentioned col we pursue our way, still towards the west, and for a short track are in Italian territory, where the frontier makes a bend. Then diverging a little to the north-west. we come back again into Tyrol by another little col, where the long spur of the Paternkofel begins, along which we have to coast till we reach the Drei Zinnen Hut which is situated on the opposite extremity of this spur. We descend from this col into a solitary little valley divided by a footpath with numerous windings, till we arrive at the picturesque hollow, so thoroughly Alpine in its nature, to the north of the Paternkofel, at the bottom of which gleams the small, emerald-green lake of Boden. There is a beautiful view from this point towards the romantic valley of Altenstein

¹ Erected in 1882 under the auspices of the Hochpusterthal branch of the Austrian Alpine Club. It serves also for the ascent of the Paternkofel, Schwalbenkofel, and Morgenalpkofel, and for travellers between the valleys of Ampezzo and Sexten. The hut is well provisioned.

which ends here, as there also is to the south of the innumerable needles and steep gullies of the Paternkofel.

Walking rapidly along the footpath nearly on level ground, by the northern slopes of this mountain, we are soon in sight of the Drei Zinnen Hut on the Toblinger Riedel, between the Paternkofel and the Schwalbenkofel, the situation of which is deservedly celebrated.

It is impossible to describe the impression that one experiences on arriving here, when there come into view, wonderfully framed in the background by the two opposite spurs that descend to the saddle, the Drei Zinnen, those three peaks unique in their way in the whole Dolomite region. Here indeed we are confronted by the indescribable. These colossal fortresses of rock, so bold, and so symmetrically placed by the side of one another, tower majestically to the sky like sentinels on guard, showing from this side-especially the two greater peaks-walls exceedingly precipitous and almost smooth. These three gigantic rocky obelisks, remarkably original examples of the most fantastic Alpine architecture, leave an impression that defies analysis, and that none of the most enthusiastic eulogists of the Dolomites have yet succeeded in doing justice to. As one of them has aptly said, the beholder can but wonder and be silent.

It was then a weird scene of enchantment, when

at night the moon, looming above the horizon in a cloudless sky, rose to show us the three matchless spires, erect and changeless, as if watchful of chance assaults, in the great nocturnal silence of the mountains; whilst on the opposite side, in marvellous contrast, she seemed to seek out the small lake of Boden, hitherto almost totally unobserved, but which in her rays was then quite magically illuminated. For more than an hour did we remain, rapt in admiration of the scene before us; then we came back to the Hut, where, in company with an agreeable Viennese climber, Doctor Eduard Suchanek, we passed a most pleasant evening.

Punctually at five o'clock on the morrow morning, September 2nd, Doctor Suchanek, with his guide Seppl Innerkofler, and I with Dimai, set out favoured by clear weather. My cousin, with Gorret and Menardi, purposed starting an hour later to join us at the foot of the Kleine Zinne, so that we might then climb the highest peak together.

Whilst on our way towards the Paternsattel, I examined with keen interest the north wall of the Kleine Zinne, studying thereon the new route discovered by Doctor Helversen, whose ascent Veit Innerkofler had described as being one of the most hazardous enterprises undertaken during the last few years,1 an ascent afterwards repeated

[&]quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1891, n. 5. p. 159.



THE DREI ZINNEN, FROM THE SOUTH. (From a photograph by E. J. Garwood, Esq.)

only two or three times, among others, I believe, by Herr Léon Treptow and Madame Imminck. Who could ever have supposed when, on the 25th of July, 1881, Michel Innerkofler and his brother Johann achieved the first ascent of the Kleine Zinne by the south face, that ten years later a new route would have been discovered by the opposite side?

When Innerkofler accomplished this most daring ascent 2 which even he at first had maintained to be impossible, people crowded in great numbers from distant villages to Schluderbach, in order to see and become acquainted with the man who had been bold enough to achieve such a daring To Zsigmondy, who questioned him enterprise. one day on the possibility of making the ascent, Innerkofler had replied: "Ja wenn'st Flügel hätt'st!" ("Yes, if you had wings!") but perhaps even then he was silently revolving the scheme in his mind. At any rate, even after his ascent, Innerkofler always spoke most respectfully of his beloved Kleine Zinne, and used to say in his Tyrolese patois: "Schlechter als die Kleinste Zinne kann a Berg schò nimmer Sein, die is a Teifel!" ("No peak can be worse than the Kleine Zinne, it is a devil of a one!")

⁴ See the oft-quoted work of Wundt: The Kleine Zinne was also ascended in winter by Herr Th. Wundt, on the 29th of December, 1892, with the guides Michele Bettega and Joh. Watschinger. They had also the day before successfully climbed the Grosse Zinne.

^{2 &}quot;Oesterreichische Alpenzeitung," Jahrg. iii. 1881, n. 68.

The first climber to ascend the Kleine Zinne was M. Demeter Diamantidi, on the 31st of August, 1881. He climbed all three peaks in the same day, a feat afterwards repeated, and to which a German mountaineer, Herr S. Zilzer, I believe, very fond of tours de force, added the ascent of Monte Piano. The ascent—without guides—of the Zsigmondy, Köchlin, and Purtscheller party on the 23rd of July, 1884,2 and that achieved by one of our intrepid associates, the Duchess Caetani di Sermoneta, under the guidance of Michel and Hans Innerkofler, are worthy of record.

Doctor E. Abbate has related, in his accurate monograph on the Tre Cime di Lavaredo 3 (the Drei Zinnen), the interesting details of this ascent, when the Duchess di Sermoneta ran serious risk in the famous "traverse," and was only saved by the presence of mind of Michel Innerkofler who was near her. She affirms this ascent to be "the most difficult and dangerous of any she has accomplished, not excluding the Matterhorn." Moreover, all the most expert mountaineers agree in maintaining the ascent of the Kleine Zinne to be an arduous undertaking. Sigmund Zilzer defines it as extraordinarily difficult, and speaks of it

^{1 &}quot;Oesterreichische Alpenzeitung," Jahrg. iii. 1881, n. 71. "Bollettino del Club Alpino Italiano," n. 49.

Ibid., vi. 1884, n. 150. "Im Hochgebirge," p. 191.
 "Bollettino del Club Alpino Italiano," 1887, p. 206, el seg.

as demanding absolute sang-froid; Gustave Euringer asserts that certain points of it are amongst the most dangerous that can be found in the Dolomites, and of the same opinion is Doctor Minnigerode who finds it, and with good reason, much worse than the Croda da Lago. M. Diamantidi, in the account that he sent to our "Bollettino," 3 agrees in this estimate, as do many other climbers.

My anxiety, consequently, to make acquaintance with this famous peak can be readily understood. And so, chatting and cogitating, we at length reach the Paternsattel (8.036 feet) between the Kleine Zinne to the west, the Paternkofel (9,000 feet) to the north-east, and the Passportenkopf (8,692 feet) to the east. A little before we reach the Paternsattel. we have a grand view from the end of it of the most imposing bastions of the Drei Zinnen towards the north, about which there is something truly cyclopean. From the Paternsattel, toilsomely skirting, over stretches of screes, by a faintly marked footpath, the formidable southern cliffs of the Kleine Zinne, we soon arrive at the lower extremity of the cleft which vawns so deeply between the Grosse and the Kleine Zinne. We climb the wild gorge between the tremendous precipices of the two peaks which overshadow

[&]quot; Mittheilungen des Deutschen und Oesterreichischen Albenvereins," 1887, n. 11.

^{2 &}quot; Der Tourist," 1880, n. 10.

^{3 &}quot;Bollettino del Club Alpino Italiano," n. 40.

it like gigantic walls, up to the point where the couloir becomes rapidly contracted. We face here the rocky gully which goes up to the Grosse Zinne in a westerly direction, and whence the ascent of the latter peak is commenced.

The point of attack for the Kleine Zinne is just in front, and can be easily distinguished on the terribly steep wall of rock ("entsetzlich steil," as Euringer calls it), which is the route we have to take. So far, indeed, we feel that the fame of the Kleine Zinne is borne out by facts. It has quite the appearance of a mountain which can amply justify its reputation. Truly, as Euringer says, any one who was ignorant of the ascent having been made by this side, would be inclined to believe it impossible. We know that it is necessary to cross from right to left the wall looking on to the Grosse But whoever looks at this traverse, asks himself where can one accomplish the feat. The last bit of the passage, the famous "Schlusskamin," looks like an absolutely impregnable wall.

It is impossible to believe that even the valorous Innerkofler, with all his muscles of steel and his mountaineer's "pluck," could have attacked such an appalling precipice without trepidation. What intense delight he must have experienced as he returned its conqueror! Now the heroic age of the Dolomites, as of the Alps, is past. The hitherto impregnable fortresses worthy of this climbing-age have nearly all capitulated. Nothing



DREI ZINNEN (TOWARDS THE NORTH).
(From a fholograph by F. Moser, Bolton.)

more than new routes and little needles, within easy reach, remain to us of the later day. Happy the climbers who may soon come to the work. Otherwise there will be little left for them to do. But the beauty of the mountains remains undiminished for ever.

After a short halt, and having donned the "Kletterschuhe"—always a great help on the Kleine Zinne—we begin the ascent at 6.20. Only when at the foot of the Matterhorn do I remember having felt such boundless impatience, the genuine climbing-fever, the irresistible fascination of mountaineering.

The first reception which the Kleine Zinne gives its assailant is a perfectly courteous one, and, for that part of it, let it be admitted, we have to deal with a noble enemy who fights desperately but fairly, as one of our climbing associates, Guido Rey, writes of the Meije.

First of all a belt of rock of a few yards has to be traversed from left to right, then climbing by an easy, small, and gently sloping chimney, a little platform is attained. Hence, describing an acute angle, we go straight up over solid rocks which afford a good climb, and by several easy and very short chimneys. We then bend northwards in the direction of the Grosse Zinne, and soon arrive at the commencement of the first mawais pas of the Kleine Zinne, the "berühmte Traversierstelle" of the Germans. It is a question of traversing a

very narrow rock-band, which, in certain places hardly concedes a place for the foot, trusting with one's hands to what slender but safe holds there are. A perpendicular wall is above, a formidable precipice below. At a certain point the rock-band fails altogether, and the climber is constrained to get round a bit of projecting rock hanging over the perpendicular wall below, crawling, or, better still, suspending himself by his arms alone. It was here that the Duchess di Sermoneta incurred the danger before mentioned.

We begin the traverse. A glance from Dimai—there is no need for it—implies that here attention must be paid to what we are about. It is one of those places where poor Jean Joseph Maquignaz would have said to his climber: "Ici, monsieur, il ne faut pas glisser." simple but necessary words in like predicaments. And truly, in this traverse, of but little aid is either guide or rope. An unerring foot and eye and absolute sang-froid are of paramount necessity. To any one who possesses these qualities the traverse will appear much less dangerous and exciting than it has seemed to many mountaineers. It takes about fifteen minutes to accomplish.

We then come to a point where to continue on the band is absolutely impossible, so it is needful to diverge a little towards the north-east over the precipice. Here begins a truly splendid scramble, over very steep but excellent rocks, first by a large vertical slab, then by a steep chimney and another rock-slab to the right of the latter. Having accomplished these passages, we bend anew to the left, and by two narrow shelves of rock, come at last to the point that M. Diamantidi calls by the name of "Kanzel," a platform above which rises, at a bold elevation, the topmost wall. We are at the second mauvais pas, at the famous chimney that Dimai takes to be the most difficult bit of the whole ascent.

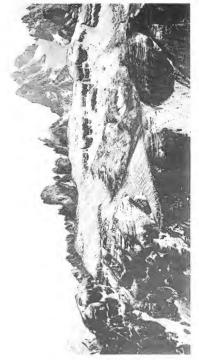
There are two chimneys in reality, "Innerkofler's Kamin" to the right, and "Zsigmondy's Kamin" to the left. The former, taken by Michel Innerkofler in his first ascent, is not now in use, above all since the Zsigmondy party, already mentioned, discovered the other on the left, which is less hazardous, though throughout difficult. We halt five minutes to contemplate the climb which we have before us. "How straight it looks," one is inclined to say. "Splendid! We have only to mount up yonder." But when the climbing begins one's opinion changes.

Dimai, uncoiling the rope to its full length—the chimney is about seventy feet high—leads the assault, and I follow as far as a sort of little niche at the base. Thence I watch with interest my brave guide hoisting himself up, and see his feet oscillating over my head, seeking a hold which is fortunately somewhere, and then raising himself slowly with sundry wriggles, halting a minute at the place where I know the hard bit must be—an over-

hanging rock outside the chimney, nearly smooth, where it is a serious matter to find any grip. A joyous shout a little after warns me that Dimai has found it, and that it is possible to mount.

It must be understood that the overhanging rock spoken of forms underneath a kind of hole, in which it is needful to take great care not to get fixed, if you would not wish to incur serious difficulties. In spite of the warnings of the guides, who know the evils of it, a great many mountaineers, Dimai asserted, get wedged in this hole, and it is afterwards a troublesome business to get them out.

Although I had been warned, this lot was mine likewise. Whether through following the holds as they presented themselves, or by irresistible attraction, I found myself trapped in the hole, and had no little trouble in extricating myself. was only with difficulty, twisting my body into all possible contortions in the hollow, and hooking on with legs and arms like a monkey, that I succeeded in keeping the hand-hold that gives the key to the situation, and in freeing myself from this awkward position, whilst Dimai, faithful to instructions, left me quietly alone, without bringing the unpleasant rope apparatus into play. The chimney being finally vanquished, by a few feet of easy rock we reach, in five minutes, the very slender ridge which forms the summit of the Kleine Zinne (7.50), and almost immediately afterwards we are joined by Herr Suchanek with Seppl Innerkofler.



VIEW PROM KLEINE ZINNE.
(From a photograph by E. J. Garwood, Esq.)

In the meantime the sky had completely clouded over, and of view there was none, save when, at intervals, through some rent in the clouds, we had a glimpse of the magnificent precipices of the Grosse Zinne. We find hidden in the cairn a few records of other climbers. Vigorous "yodles," which we cordially return, reach us from the members of my cousin's party, who watch the fun seated comfortably at the foot of the Grosse Zinne. At 8.25 we commence the descent—our party first.

Whoever, with only one guide, descends for the first time from the summit of the Kleine Zinne, experiences the sensation of being almost suspended in space, so aerial is the position. In fact, at this height, we must have appeared to those who saw us from below, as if poised in mid-air. The chimney is not much worse in descending than in ascending. In any case, being very steep, there is the advantage of a greater saving of muscle-wear. With due caution, and without mishap, we reach the platform, then Dimai goes first, not without a warning to have an eye on the rope. On the Kleine Zinne, both mountaineer and guide must be mutually careful of each other, above all, during the traverse.

After the chimney, the descent by the underlying rocks, as far as the traverse, appears to us much less hard, doubtless because the rocks are, as has been said, of such thorough solidity. Sticking close to the wall, carefully testing all the hand-

holds, and considering every step, we retrace our way along this most interesting traverse, a feat in which my cousin told me afterwards he himself had shared from below with no little misgiving. The "Kletterschuhe" are at this stage of the descent of the greatest utility. After it, we are past all difficulties, the remainder of the way down being a mere nothing compared to what had gone before, and we nimbly let ourselves down by the easy rock-steps that follow.

At 9.25 we are again at the foot of the rocks, having taken exactly an hour to come down. At 10.30 we are joined by Doctor Suchanek, who had delayed his departure on account of the volleys of stones.

As has been said, my cousin and I had arranged to climb afterwards together the Grosse Zinne; but to be candid, so threatening was the weather, that the idea of making the ascent completely in the mist pleased neither of us, especially since we had just come from the much more interesting Kleine Zinne. The brave Menardi, who, besides already possessing many of the endowments of a good guide, has an ardent and praiseworthy love for the mountains, was on this account all the more displeased at not having climbed the Kleine Zinne with us, an ascent he had already made twice, and with which he had been exceedingly delighted.

We remained a long time at our rendezvous, and only towards midday did we resume our descent toSchluderbach, by the Rimbianco Alp. This route is not described here (besides, it is well known) as the mist hindered all enjoyment of its interesting features. Suffice it to say that our walk was enlivened by the chat, songs, and lively jests of Dimai, who was in high good humour.

At three o'clock we reached Schluderbach, and after a rest at the excellent Ploner's Hotel there, returned to Cortina in a comfortable carriage, playing at *morra*, and sheltered from the pouring rain.

To make a brief résumé of one's impressions of the Kleine Zinne, it would seem that its true difficulties are concentrated in the traverse and in the last chimney; the latter is perhaps technically more hard, owing to the rock in the middle. The rest is merely steep-in many points, indeed, very steep. The rock is almost solid throughout the ascent. It is essentially a difficult climb, not to be exaggerated, but to be taken seriously, and is fit only for experienced mountaineers who are very sure of their heads and likewise of their feet. As has been said. on the Kleine Zinne guide and climber must be careful for each other's safety. One guide alone (as Rey says of another peak) would suffice for two expert cragsmen, whilst an indifferent climber would be an unsafe companion for two practised guides.

Thus in five consecutive fine days, snatched out of a period of very bad weather, we had carried out our programme of the Sexten Dolomites, from

which we brought away ineffaceable memories. Now that same programme prescribed some days of rest at the "Hôtel Faloria," and as much patience as continuous bad weather would need; but when on the second day, contrary to our expectation, the ridge of the Croda da Lago showed itself so enticingly against a clear and wind-swept sky, how could we resist?



CRODA DA LAGO, FROM THE WEST. (FORMIN SIDE.) (From a pholograph by Signor L. Sineragian)

CRODA DA LAGO (8,813 FEET).

FIRST ASCENT BY THE NORTH RIDGE.

O many efforts had been made to find a new route up the Croda, for so long reckoned inaccessible, and still more so, after the attempts of the best guides in Ampezzo, that the problem of discovering another one appeared very difficult of solution

Some deviations were found by Mr. T. E. Wall, rather against his will, indeed, in his ascent with the guide Lacedelli, and especially by the Zsigmondys with Köchlin and Purtscheller (an ascent made without guides on the 30th of July, 1884). The first mentioned had kept too much to the right of the principal chimney, and only with serious difficulty gained the proper route much higher up. So also did the Zsigmondys who, as appears from their description, found much greater difficulties than those incurred in the line of ascent ordinarily followed.

Herr R. H. Schmitt had found a much more important variation in which, although he was in-

^{1 &}quot;Im Hochgebirge," p. 200.

These variations are therefore practically of little importance, since the two first are insignificant and the last is very difficult, and is but little recommended by Herr Schmitt himself. It is to be hoped, however, that he is exaggerating when he declares that the worst points in the ascent of the Kleine Zinne are nothing compared to certain passages in his route up the Croda.¹

Of the western face, which looks on to the Crepa di Formin, mention has already been made. By reason of its appalling steepness, exceedingly bad rocks and stone-falls, it offers but very little possibility of being successfully ascended. Herr Schmitt is not of the same opinion, as he extols the west face as the future way up the Croda. In any case, such an attempt must be imprudent. Where the rock is good, one can do wonders. Where it is bad, it would be madness to make any attempt.

There remains the northern ridge, whose sharp steep spires, symmetrically notched in precipitous steps, as seen from Cortina, give the climber but

" "Der Tourist," 1889, n. 19.

little hope. It is obvious that the passage from one to the other of these spires cannot be always practicable, and the chance of being able to round them on the formidable west and south-east walls seems very doubtful. No one, indeed (as far as I know) has attempted the Croda from this side.

For the better understanding of our new route by this very face it will be necessary to notice, in a résumé of his description, the salient points of Herr Schmitt's route. He, with two of his colleagues, had set out by the ordinary way up the Croda, and taking as their starting-point the "Rast-platz," had already climbed a good stage of it. Seeing another climber with a Cortina guide in the distance following on their track, he, like the enterprising cragsman that he is, was impelled by rivalry to do a great deed, and ascended the remainder of the way to the summit by a new route. He diverged then to the right (keeping his plan secret from his companions), as if to leave the field free to the new-comer, and the two parties were soon hard at work. At first no serious obstacle presented itself. The rocks were not easy, but they afforded excellent hand-holds; a little above them they saw the crest, which they soon reached. From this ridge, flanked on the south by a tower of rock impossible to get round, and falling on the west in tremendous cliffs towards Formin, they had to traverse a very narrow ledge of bad rock, not more than four inches wide, for which Herr Schmitt finds the qualification "extraordinarily difficult" not too emphatic. This passage is dizzily suspended above the eastern face of the mountain, and one sees at an enormous depth below a most imposing sight, the Lago di Federa.

This ledge accomplished, they came to a deep cleft in the ridge, closed in by formidable walls. They mounted by the chimney that opened before them, and achieved it easily. But having got to the top, they found themselves in a grave difficulty. The three cliffs to the right, to the left, and in front of them were overhanging. For a moment they believed the obstacle insurmountable; but Herr Schmitt succeeded, by extraordinary efforts, in overcoming the wall on the right, and in gaining the top of the cliff, where his companions quickly rejoined him. The ridge stretches away, a thin line of pinnacles, towards the south, to the summit. Against this ridge. which is the larger of the two to the north of the summit, rises a steep wall, which they climbed. Then they found themselves confronted by another wall which they easily rounded on the western flank, emerging thus on the secondary peak to the north of the summit. A short but dizzy scramble brought them at last to the wished-for summit itself, where they found the other party had arrived by the ordinary way.

Herr Schmitt says, moreover, that we ought not to lose the hope of finding an easier route up this rugged mountain. He, as has been said, believes in the possibility of succeeding by the western face towards Formin. The partly new route adopted by him he does not advise others to take, seeing that it was in this particular instance imposed upon him by the force of circumstances rather than by choice. We now come to our own ascent.

The longing to discover a new route up the Croda da Lago had possessed me from the first days of my arrival at Cortina, especially after making the ascent of this fine peak by the ordinary way. I spoke of it to Dimai, proposing to him a serious attempt by the northern crest, which ought not, I thought, to exclude the possibility of success. From the west side I was not by any means disposed to attempt it.

A new route up the Croda! Nothing more was wanting to excite the ardour of our brave guide, who embraced the project enthusiastically, and without any preparatory study, with his splendid unshaken faith and professional love of improvising routes, agreed to share the enterprise with me. But various circumstances prevented our attempting it till the 5th of September. The evening of the 4th, for the better saving of time, we betook ourselves to the Albergo Tofana, near Pocòl, to stay the night there. We were a party of five. My cousin and his guides, Tobia Menardi and Arcangelo Dibona, were bound for the Croda by the ordinary way of ascent, whilst I, with Pietro Dimai,

meant to go by the new route we intended to explore.

At 4.20 on the morrow morning we left the Albergo in splendid weather. The rising sun was gilding little by little the summit of the Croda which had a more than usually stern-one would almost say disdainful-aspect for the climber. We eagerly contemplated the very steep ridge while hastening on to its assault. At last, following the route already described, and which we had adopted in our former descent from the Croda-except that now we kept on the left of the little valley of Cordes-we reached the plateau of the same name which bounds the base of the mountain as far as the "Rast-platz," where we arrived at 7.35. As a matter of fact, the rock-climbing to take us over the northern crest ought to have begun before reaching the "Rast-platz," but we wished to accompany my cousin and his guides so far, and halt with them for half an hour.

Punctually at eight o'clock they set out by the customary route, and we, coming back for a little way, and putting on the "Kletterschuhe," took to the rocks at 8.10 by an easy and wide stony gully, which, according to Dimai's calculations, should lead us directly to the northern ridge. Of this we could only see some straight-cleft spires, and most unpromising they looked. The beginning of the climb is easy; there is hardly any real rock-work. Having mounted about twenty yards, Dimai

doubted if it were not better, instead of continuing direct by the gully, to trend to the south, in order to turn afterwards to the right and take to the crest. Accordingly we abandoned our present track, and diverging a few yards to the left by easy steps of good rock, reached a platform from which we could see my cousin's party climbing up. From this platform, surmounting a steep wall with excellent grips, we bent to the right again and, by a narrow chimney, quickly gained the ridge we were aiming at. This at once afforded a very fine passage. He had to round, in a westerly direction, a steep rock-face, so smooth that it hardly conceded trifling hand and foot-holds at some distance apart. A long straddle gave the key to success.

Having thus got round the rock-face, we soon find another original passage, aerially poised on the ridge. It is a fairly upright wall, flanked by a lower ledge and another wall forming as it were a gallery, and over which we go balancing ourselves, till we gain an enormous boulder which makes an angle with the end of the wall. We climb this angle, and are soon at the top. From this curious passage we came out on easy screes, then, by a short chimney, and other easy rocks, we arrive at another fine rock-face, for all this ridge of the Croda is curiously formed by spires rising regularly one above the other. The interest is incessantly alive, and we climb with genuine zest, anxious for what is to come.

Schmitt has well expressed the intensely thrilling excitement of rock-climbing, in his narrative of one of his ascents up the Croda by the ordinary route. After describing a difficult scramble that cost him much effort, he says: "People treat these matters as if they were quite simple affairs that can be done without fatigue, but how strained our attention is, how acute and violent the muscular effort, how immense the exertion of the will to tax every muscle to the utmost! These are things that cannot be expressed in words; they can be understood alone by one who has wrestled, on these heights, with the rocks."

The rock-slab we have before us is very steep. It has to be attacked midway by a narrow crack, then we have to crawl over to the left, so as to catch hold of the cloven ledge above us, on which a good grip and effort of arms soon land us. We thus reach another platform, and another rock-slab, always on the ridge, that up till now we have closely followed, save in the first ten minutes that we took to gain the foot of the rocks.

The large rock-wall, which is awaiting us this time, has anything but an inviting appearance. Both of us make wry faces as we look at it." "Go paura che' de là no se vada" ("I am afraid we cannot go that way"), is Dimai's remark to me. However, there is no other way up, we are perhaps near our goal, and we must needs overcome the obstacle at all costs. "Let us try to

surmount it," say I. And, in fact, on the left, a very narrow fissure, wherein we have to pass obliquely, dragging our knapsacks behind us, affords a passage. We get through this opening. A cry of triumph resounds. We have hit the mark. A few yards of easy scrambling, bearing to the right, and we are at the foot of the last rock-slab, certain of success, for behind it is the topmost peak we are making for.

Having gained the platform, we climb up by the flat face of the rock, steep but with excellent holds that render it easy to scale, and we are immediately after on the secondary peak, more to the north of the northerly peak of the Croda. The victory is In a few paces we go down the fork, where the climbers by the ordinary route arrive, then mounting the few yards of the ascent that yet remain, we are on the summit. Looking at our watches, we find we have been forty-seven minutes coming from the foot of the rocks. Such a result was indeed unhoped for. Dimai, radiant, makes the echoes of the Croda resound with "yodles." The other group is still on the way. And yet, when we parted from them, they thought they should have to wait for us on the top, perhaps long, perhaps uselessly. Twenty minutes after our arrival on the summit, we are joined and warmly congratulated by our colleagues, and then make an hour's halt.

At ten o'clock we begin the descent by our newly

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discovered route, of which we are anxious to test the practicability by again using it. My cousin, too, and his party, curious to learn the new way, descend along with us. The route adopted in going up is again scrupulously followed without mishaps, and with great success. At 11.30—the increased number of our party, and the consequently greater care to be taken, having considerably retarded the descent—we are again at the foot of the rocks, where we stay an hour and a half, enjoying alike the sunshine and the sweets of victory. At one o'clock we resume our way, passing again through Pocòl, and towards 4.30 are back again at Cortina, where our success is hailed with lively satisfaction.

"The discovery of a new route up an already well-known peak," wisely wrote our esteemed colleague, Guido Rey, "is a matter of little interest when the one so found does not boast any advantage of safety, brevity, or convenience over those already known." It can be conscientiously affirmed that this new route up the Croda just described combines all the qualities above enumerated. It is shorter and more direct than the old way. Climbing energetically, exclusive of halts, one can reach the summit from the foot of the rocks in three-quarters of an hour. The climber proceeds for most of the way on the ridge, and is not therefore exposed to stone-falls. There are more or less easy passages in it, but whilst in the Schmitt variation, for ex-

ample, some passages are "extraordinarily difficult," not one in this route is worse than the ordinary way up the Croda, and are all merely short rockslabs of twenty or twenty-five feet in height at most. The rock is nearly everywhere in trustworthy condition. One guide is enough, taking into consideration the nature of the climb, and the difficulties to be encountered. Two, for this as for the other route, would be useless to an experienced mountaineer.

As a climb it is a delightful scramble, full of constant excitement, and of a totally different nature from the other ascent. On account of this the two routes should be properly combined in crossing the mountain. This can be done with notable advantage, when two expeditions are doing the Croda on the same day.

Our account cannot conclude without a word of well-deserved praise to my excellent guide, Pietro Dimai, who directed the ascent with a foresight

Schmitt's variation, mentioned at the beginning of this article, lies clearly—topographically speaking—between the ordinary route and that of the author by the northern ridge. But whilst the Schmitt route, on its explorer's own confession, is lengthy, laborious, and very difficult, that by the northern ridge is very short, simple, and almost easier than the old way. The Schmitt route turns off almost entirely over the precipice to the right of the ordinary path. The present writer's leads, except for the first ten minutes, altogether over the northern ridge. We believe these remarks will be opportune, because in that excellent work already quoted, "Die Erschliessung der Ostalpen," p. 385, the new route is held to be almost equivalent to Herr Schmitt's.

truly marvellous, and did not miss the route for a single instant, although he had not previously dealt with it even in theory.¹

¹ This guide is, without doubt, one of the best in Cortina, a sure and most expert cragsman, enterprising in conceiving and prudent in executing a project, he fully possesses the art of scaling rocks. His enthusiastic love for new and daring undertakings is well tempered by the experience that he has acquired in a long series of ascents, and those not in the Dolomites alone.



CRODA DA LACCO (WEST SIDE).

A IL Decent of Mestr. F. L. and M. Ginther (Herlin), August 21,1%s.

C. D. First Ascent of the North Peak by the West Face. (Leone Shiftingful, August 20, 1%s);

E. North Rafer.

cent of the South Peak by the South-West Face and South Ridge. (Leone Sinigaglia, August 27, 1895.) (From a photograph by VICENZO COLLI, Cortina.)

CRODA DA LAGO.

FIRST ASCENT BY THE WEST FACE (1895).

I N one of his interesting articles in the "Tourist," that well-known mountaineer and doughty champion of the "Austro-German Alpine Club." Herr R. H. Schmitt, recounting an ascent (without guides) of the Croda by the ordinary route, says, when speaking of the famous western face, "It seems to me that this ought to be the future route up the Croda." These words made me seriously consider the general possibility of a new way being discovered up this noble mountain, and in 1803, after giving up all attempts by the western face, which seemed to offer hardly any probability of success, particularly as I heard there was constant danger from the bad rocks and stone-falls, I devoted my efforts to the northern crest. On this crest, in company with the excellent guide. Pietro Dimai, I was lucky enough to discover a new and direct route, so much easier 11 145

and more attractive than the old one, that it is now preferred by many.

Encouraged by this success, putting aside my former prejudices, I began from that time to vaguely formulate a project for attacking the western face, and finding myself this year (1895) once more at Cortina d'Ampezzo, I determined to attempt it. The skilful guide, Zaccaria Pompanin, accepted my proposal with enthusiasm. Associated with us was Angelo Zangiacomi, and a very good second he proved. Late in the evening of the 28th of August, 1895, we stole away from Cortina, night favouring the secrecy of our expedition, and slept at the "Albergo Tofana" at Pocòl, in order to gain a good hour's start on the morrow, and the better to keep our own counsel with regard to our intentions.

At 3.30 on the morning of the 29th of August, we left the "Albergo Tofana" with lovely weather. By following the pleasant footpath which leads through the small valley of Cordes by the side of the Costeana stream, and afterwards ascends by windings through the steeply-sloping forest towards Valle Formin, we arrived in an hour at the Casón di Formin, a small shepherd's hut at the top of the wood, just at the foot of the first western counterscarp of the Croda. As we climbed by the track of a footpath, through the detritus with which the Valle Formin is quite covered, and which bears witness to the tremendous decomposition of these worn and precipitous sides of the Croda, the

soaring spires and huge, imposing walls of the proud mountain could be descried more and more clearly under the rising sun. Nor could we regard without some misgivings the precipice we meant to scale.

Already, two days previously, we had passed this way, when we climbed for the first time, by the western face and south crest, the extreme southern peak of the Croda, without serious difficulty. But now we had to deal with the northern peak, which was quite another thing, and we were girding ourselves for an enterprise which bold cragsmen did not dare to try, or in which, if they did try, they failed.

Thus, carefully reconnoitring our ground, we arrived nearly as far as the top of the curious plateau known as the Lastoni di Formin, mounting higher than was apparently needful to get a better view of the Croda. Nearly in front of us rose the northern peak with its double summit in all its boldness. Especially formidable appeared to us a smooth gully, vertical or even overhanging, which rends the face of the mountain exactly opposite the saddle whence one reaches it, climbing by the ordinary route, before rounding, in a westerly direction, the topmost pinnacle. Up this gully it was impossible to climb, and its left side offered-to the spectator who confronts it from the Valle Forminbut little more hope of victory. We unanimously agreed that the only likely probability of success lay in trying the ascent straight to the summit by

the great rib which rises there excessively steep. We have to attack this rib immediately on the left by a lofty, dark, vertical chimney which cleaves it in two at the base.

So, after a long rest at the Lastoni, somewhat retracing our steps, and cutting diagonally across the stony slopes of the Croda, we gained the base of the rocks, and at 7.30 we attacked, at the aforementioned spot, the face of the mountain.

The first rocks, although steep, are good and easy, and contrary to our expectation, fairly firm. By these we advance with relative speed, soon bearing slightly to the south-east in the direction of the summit. Shortly after this the real interest of the climb begins. First of all a straight rock-face. then a short arête and a steep chimney of about twenty feet high. To the latter succeeds a good traverse of about thirty yards long towards the right, which somewhat recalls that of the Kleine Zinne, and requires attention, although the precipice beneath is not so formidable as in the latter. From the end of the traverse we bend for a few yards to the left, after having tried an impracticable rock-slab. Then we pursue our way straight ahead over a succession of steep rock-ledges giving good hold, and further take to a rock-ledge which carries us to the right, and breaking off at one point, gives place to a fine straddle.

We thus reach a little niche in the underlying couloir, and follow the chimney for a time. Then

CRODA DA LAGO, FROM THE WEST.

(From a photograph by Signor L. Sinigagia)

comes another ledge of rock and another rockslab, nearly right in front of us. Bending a few yards to the left, we find a splendid over-hanging bit, with scanty holds—about four to five yards high—which the first guide surmounts by raising himself on the shoulders of his comrade. Here we follow a straight, not difficult arête, and then trend to the right as far as a lofty chimney closed half-way up by a mass of rock. We have to climb diagonally, by two interesting traverses, towards the right, till we find ourselves at the extremity of a steep couloir, of which the further continuation is apparently barred by a lofty, overhanging bastion of rock.

Till now, everything had gone well, indeed too well. The difficulties we had encountered were not greater than those to be found on the ordinary route. However, we knew the Croda had surprises in store for us, and already we began to sniff something in the air. A rapid glance showed us what was coming. The rock was for eight or ten yards vertical, a good piece of it was then overhanging, the holds were nearly useless, very far apart, and turned downwards. A protuberance on the face of it towards the right—and under this, as on the Kleine Zinne, was a niche where we halted—alone offered some doubtful support whereon a climber might raise himself by his arm and right leg.

Pompanin made a spirited assault upon it, and it took all his great skill to crack such a hard nut as he found here, all the more hard as after the ledge there came a large piece of nearly smooth rockface. With great trouble he succeeded, by crawling along on hands and feet, in arriving at the top, and in finding a good vantage-ground, paying out meanwhile the full length of the rope and at the same time pouring forth all the interjections in his vocabulary.

A cry of triumph, announcing his success, reached me in my niche. I quickly emerged, and putting all my climbing resources to the test. I managed to scramble up too, in what way it is not easy to tell, since it is by simple dint of sticking on to it that such a bit is surmounted. At any rate, I at last found myself by Pompanin's side, and we were afterwards joined by the hardy Zangiacomi, who had likewise made gallant efforts. This stage of the climb is magnificent and truly difficult—much more so than the last bit of the ascent of the Kleine Zinne, to which it bears some resemblance. The guides rank its difficulty greater than that of the well-known maucais pas of the Winklerthurm.

Having rested a little, we go on for a few feet to the left, thence by a large rock-slab and an easy chimney, we reach a wide couloir, wherein there is formed a species of large niche or grotto. Here we make a halt, the place being suitable and safe from stone-falls.

It is 9.30 and, so far, we are fairly contented with the progress we have made. We now resume our climb with renewed ardour, but before leaving our grotto we erect close by-as at so many other points-a small cairn. We then find ourselves confronted by a steep rock-face of from six to seven vards, which gives on to the niche to the right. Excellent holds make it easy work. Afterwards. we are surprised by a long and relatively easy gully, which soon takes us much higher in the direction of the summit. The couloir finished we come to a fork in the gully, and a serious outlook it is. On the right we have a very steep, dark, vertical chimney, which seems to lead very far up, but which midway offers but a doubtful passage. On the left we have rocks of better appearance, but which in the higher part look anything but promising. ever, we set to work to scale them. First by rather difficult rock-slabs, then trending to the north, nearing the while by degrees the northern crest of the Croda, we reach the foot of one of the numerous pinnacles, in fact, the very one which forms a curious passage, that I have described elsewhere in relating my first ascent by this route.

At this stage we held the rest of the way to the summit very cheap. It was sufficient to make for the crest. But we had resolved to achieve the ascent completely by the western side, so, stoically turning our backs on the northern crest, we went towards the right and began to round the tremendously steep western face of the mountain. This brought us to the second maucais pas of our ascent,

and exciting enough we found it, for here we have a traverse of about thirty yards along an exceedingly narrow and, at one point, broken cornice, suspended above a truly appalling perpendicular height, giddy in the highest degree. With the greatest care we manage this exacting passage, one of the most ticklish bits of its kind that I know, and soon emerge on a small platform at the foot of a steep chimney of very bad rock, defended by a sharp Zangiacomi, having rounded and scrambled up the elbow, succeeded, with great wariness, in getting up this trying piece, where the largest blocks were insecure. Dragging himself up by these he reached the top of the chimney, and there we joined him. We were now on the top of a pinnacle, in front of which there towered proudly, and close at hand, the extreme peak.

Victory was ours. We were actually on the northern crest. A few minutes more of relatively easy climbing separated us from the topmost one, and it was not worth while going to seek useless and perhaps impassable difficulties on the western side, which is here quite perpendicular. So we descended on to the crest, and from there, in ten minutes' time, having surmounted the last two very short rock-steps, we gained the summit at 11.50.

To describe the joy we experienced at this moment were difficult. Never, perhaps, had I tasted the sweets of victory to such an extent, and these were shared to a great degree by my good guides, who were never tired of filling the echoes of the Croda with shouts of triumph, and of making signals to Cortina, whence they knew they were being watched.

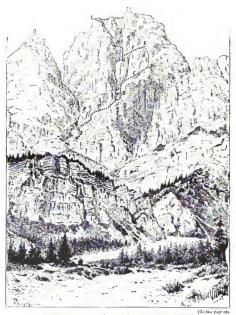
For two delightful hours we remained up there enjoying our success, of which I wrote a short account in the little book kept on the summit. At 1.30 we commenced the descent by the old route, which is, after all, ever pleasant and interesting, although very short and, relatively speaking, not remarkably difficult. From the foot of the rocks to Cortina was then only an easy stroll, the heat of the sun, as well as the grateful shade, and waters of the Costeana, tempting us to frequent halts. And so it was seven o'clock before we arrived at Cortina. There on into the night we celebrated, with numerous toasts, the new route up the Croda by the long-envied western face.

To make a resume of my impressions of this mountain-climb, I am bound to say that it is the most splendid, and at the same time the most difficult in the Ampezzo Dolomites. The interest is unflagging from beginning to end. There is nothing commonplace in the whole climb, and the rocks are good enough, save in the last part. We did not hear any stone-falls. Technically speaking the most arduous passage in the lower half of the ascent is the slab of overhanging rock. In the higher part, the traverse, perhaps less difficult but

demanding great care, is extremely exciting. The last chimney of very bad rock which overlooks a considerable precipice, is a matter of much responsibility for the leading guide. The rest of the climb does not present greater difficulties—to quote a well-known example—than the Kleine Zinne by the ordinary route.

If the route up the western face of the Croda will not supplant, for a long time at least, the other two ways—far easier—by the eastern face and the northern crest, at all events, I hope that the former will find increasing favour with genuine and enthusiastic cragsmen, as it deserves. However that may be, it is an ascent which ought only to be made with guides of tried skill, as, omitting mention of many others at Cortina, mine were, for to them in a great measure the success of the enterprise was due, ¹

Herren F. L. and M. Günther, of the Austro-German Alpine Club, having gained the summit of the Croda da Lago by the ordinary route, made the descent by the northern arête. Arrived at the foot of the latter, instead of bending to the east towards Cortina, they came direct by the west face into the Valle di Formin. But this partial descent by the west side has nothing in common with the route taken by the author in his first ascent a week afterwards.



MONTE CRISTALLO (TOWARDS THE SOUTH-WEST).

(From a phologoph by Alessandro Cossirin, Bolgon)

A, Attack Rocks B, Rock face CD, First Rock-bil. EG Second Rock-bell. GH. Couloit.

L, North-West Ridge. M. Summit O, Cresta Blanca ++++++++ New Roule.

MONTE CRISTALLO (10,492 FEET).

FIRST ASCENT BY THE SOUTH-WEST FACE.

U P to the beginning of the past climbing season (1893) the ascent of Monte Cristallo could be accomplished by the following routes.

- 1. Schluderbach, Glacier and Pass of Cristallo, South Face. First ascent, P. Grohmann, guides Santo Siorpaes and Angelo Dimai, 14th of September, 1865. This, which is by far the easiest of all the routes, is still the route par excellence for Cristallo. The pass can also be reached from Cortina more easily, and in about the same time as from Schluderbach, by Tre Croci and the Grava di Cherigeres.
- 2. Schluderbach, Glacier of Cristallo, North Face. First ascent, Doctor Minnigerode, with Michel Innerkofler, September 19, 1877.2—This route does not touch the Pass of Cristallo. The climber mounts by the northern side of the so-called "Mittlere Cristallkopf," traverses the ice-couloir

¹ P. Grohmann, "Wanderungen," p. 212, ct seq.

² See W. Eckerth, "Die Gebirgsgruppe des Monte Cristallo," p. 27.

which separates this peak from the highest one, and reaches the latter by the extreme rocks of the northern face. This very interesting ascent was afterwards repeated several times, among others by I. Santner, of Botzen, and Fräulein M. Eckerth, both with M. Innerkofler. Two important variations were found respectively by Count C. Wydenbruck, with Michel Innerkofler, on the 14th of June, 1887. who mounted direct to the summit of Cristallo by the steep ice-couloir that cleaves the northern face of the "Höchste Cristallkopf"-a route not always possible, and of which the difficulties depend on the condition of the mountain 1-and by Herr Emil Artmann, with Seppl Innerkofler as guide, on the 19th of August, 1889, who climbed Cristallo substantially by the Minnigerode route, but directly attacking the very steep bastion which defends the northern face, a difficulty which had so far been avoided by preceding climbers.2

3. Schluderbach, Pass of Cristallo, East Face. First ascent, L. Friedmann, with M. Innerkofler as guide, on the 26th of August, 1884. He climbed direct from the pass to the summit—avoiding the long détour by the southern side—by the east face, especially difficult in the upper part, where the rocks are very bad.3

¹ W. Eckerth, op. cit. p. 30; "Mittheilungen des Deutschen und Oesterveichischen Alpenvereins," 1887, n. 18, p. 220.

^{* &}quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1889, n. 16, p. 197.

^{3 &}quot;Oesterreichische Alpenzeitung," Jahrg. vii, 1885, n. 186.

Herr W. Eckerth, who has written so accurately and skilfully on the Cristallo group, after having enumerated in a chapter of his book the different routes found for ascending this mountain, concludes in these words :- "Thus the highest peak of Cristallo has been ascended by the southern, eastern, and northern sides, an ascent by the western face alone being hitherto unachieved. And just such an ascent from the western side may be perhaps, in the opinion of more than one person, a very simple matter, since the ice-couloir that rises between the highest and middle peak of Cristallo goes up to a great height towards the west wall. which from the ridge rises to the summit at a height of only 400 to 420 feet. But the above-mentioned couloir is so much exposed to volleys of stones that it must be held to be practically inaccessible, and its ascent should not be bazarded."

The west face, or, to be more accurate, the west-south-west face, of Cristallo is just the one that looks on to Cortina. On my first arrival at Cortina, knowing it to be a favourite starting-point for Cristallo, I believed the ascent had been already done from this side also. I had only superficially examined it. With surprise I learnt instead that this side had remained hitherto unclimbed, and that to gain the summit climbers from Cortina had to go all the way round by Tre Croci, thence by the Val d'Oriei and the Pass

¹ Op. cit. p. 27. ct seq.

of Cristallo, and over the southern face of the mountain, a route likewise common to the climbers from Schluderbach. From that time forward I secretly formed in my own mind a plan of attack for the west-south-west face, which, fortunately for me, had so far been the only one to resist all attempts, in spite of the many ascents made during nearly thirty years by other routes.

A more attentive examination of this side, made at different times and from divers points of view, especially during an ascent by the ordinary route. convinced me that the enterprise could not by any means be an easy one. This face of the mountain is excessively precipitous—its steepness can be estimated after a fresh snowfall—and is formed of high vertical terraces ranged one above another, apparently smooth, and furrowed diagonally by belts of strata broken here and there. A narrow gully, tapestried in the upper part with snow and ice, cleaves the mountain-face in the centre, dividing itself, a little below the terminal crest, into two secondary branches.

From the point of separation of the two branches runs a wide belt of rock, clearly visible from the Tre Croci road, as far as the huge southern spur, a little below the height, probably, of the "Böse Platte." Another band, much larger and more distinct, at about two-thirds of the height of the precipice, starts from an arête to the west of the southern rib, and gently slopes downwards as far as the

middle gully that cuts this face of the mountain. As to the large imposing southern rib itself which appears to lead direct from Tre Croci to the summit, it is broken halfway up or a little less by a frightful precipice, which falls in a lofty and very narrow gully to the west, nearly to the Grava di Staunies-that valley of screes which runs nearly parallel to the neighbouring Grava di Cherigeresas far as the foot of the west-south-west face of Cristallo. To the west of the principal bulk of the "Höchste Cristallkopf," as Eckerth calls it, rises the "Mittlere Cristallkopf" (10,266 feet), with its fine Between the two peaks runs a deep, precipitous, ice-filled cleft, the same which Eckerth mentions, and which deters the intending climber from this route. Such is the aspect of Cristallo from this side.

Having imparted these projects to the brave Pietro Dimai, who received them with his usual enthusiasm, we agreed to give up all idea of climbing the dangerous ice-couloir, from which Eckerth had dissuaded us, and formed together the plan for achieving the ascent directly and entirely by the west-south-west face of the mountain.

We had heard of vain attempts made by guides up the above-mentioned side—Alessandro Lacedelli and Michel Innerkofler, for example—and of the rather hopeless opinions expressed by expert climbers on the subject. All this, whilst it inspired

us with some faint mistrust of success, on the other hand spurred us on to keener efforts. Twice we had to postpone it on account of the bad weather, and it was a source of much regret that my cousin was obliged to leave us in the interval. Finally, on the evening of the 10th of September, with a very clear sky, we were able to get up to Tre Croci. We had increased our party for the occasion-as it is sometimes advisable to do when exploring a new route-by taking with us Zaccaria Pompanin, who obtained his certificate only a year ago, but who, young as he is, can already be eckoned among the most agile and expert cragsmen of Cortina. I shall have occasion to mention again this excellent guide, who has a brilliant future before him.

On the morning of the 11th, at 4.20, we start from the Tre Croci Hôtel without having given any hint of our projects. Leaving to the right the Val d'Oriei, which leads to the Cristallo Pass, we bend decidedly to the west, and, by a footpath through scattered pine-trees and low shrubs, we trend towards the entrance of the valley of the Grava di Staunies, which ought to lead right into the middle of this flank of Cristallo. We ascend the stone-strewn valley, scrupulously following the line of the stream, and rounding the western flanks of the enormous southern spur of the mountain, till we arrive at a desolate rocky amphitheatre, where a high wall apparently bars the way before



CRISTALLO, FROM TRE CROCI.
(From a photograph by Alois lieer, Klagesfurt.)

us. Here we make a twenty minutes' halt, waiting for it to become light in order to better study our plan of attack.

We resume our way, and as we near the curtain of rocks—viewing this from the distance it seemed as if we had to climb by a steep fissure which cleaves it about half-way up—we discover more to the right an easy passage made by the powerful erosion of the water through the wall, and we find therein a wide gorge and penetrate it. This gorge, enclosed by lofty, gloomy, vertical walls, has a most imposing effect. The water dashes through it between huge boulders, heaped up one above another in titanic fashion. One of these affords a fine scramble over a smooth and overhanging rock, which is short but exciting.

In a quarter of an hour's time we emerge from the wild gorge into the welcome light of heaven again, to find ourselves in another larger rocky amphitheatre commanded by the mighty precipices of Cristallo, although a spur which juts out towards the west from the great southern crest hinders us from seeing the side we want to scale. We mount, toiling over the screes, bearing over to the right bank of the torrent, and thus come out into the second part of the amphitheatre, in the cul de sac of the western face of Cristallo, crowned by the bold pyramid of the Mittlere or Ampezzaner Cristallkopf, and by the precipitous western walls of the principal mass of the mountain, which we

contemplate with a feeling of wondering awe and impatience. They are very fine, but decidedly unpromising.

Dimai tells me that the key to the climb is to be found in the middle fissure. If one cannot achieve it from there, there is no more hope.

We turn a little to the north, and traverse a short stretch of the ice-covered cleft which goes up between the Mittlere and the Höchste Cristall-kopf. In ten minutes we abandon it, and, climbing a flank of very friable rock which looks on to the cleft, we bear to the foot of a steep ledge rather to the right of the middle fissure that we have fixed upon as the point for beginning the rocks. It is seven o'clock. We stay here till 7.40. "Forward and courage!" cries Dimai, and off we go.

We climb in an oblique line towards the right by easy but untrustworthy rocks that need caution, and continue for a short tract still to the right, till we tread a narrow cleft which soon presents a short, smooth chimney about four yards high, up which we scramble. We go on climbing over the left edge of the rift, till after some minutes we are obliged to descend, by jumping from a rock, from two to three yards in height, on to a small platform. The fissure continues on the right, but we cannot get higher by this way—and besides, an enormous flat rock-face about 160 feet high appears (only

appears) to offer a better passage to the left of the fissure, and we choose that direction.

Dimai, alone and unroped, as is his invariable way when climbing, attacks this slab of rock, whilst Pompanin and I watch him with lively interest. We note from the beginning that our brave Pietro is obliged to make violent efforts to drag himself up, working with finger-nails, elbows, and knees, sticking close to the rock, making extraordinary exertions, and yet gaining ground with unusual slowness. "Diavolo! then it must be a bad bit," we say, and Dimai quickly confirms our opinion. He arrives half-way up, and stops a minute to rest in what is a very uncomfortable position. Here soon after, by great exertions on his own part, the plucky Pompanin joins him, and they both pursue the stiff scramble till they find a relatively solid standpoint under a projecting rock, to which they make fast one end of the two ropes-which had been joined together for the purpose-throwing the rest of it down to me as far as it will go, about 140 feet.

Then I emerge from the cavity in the rock wherein I had ensconced myself to avoid possible stone-falls, and go up in my turn. Following the example of the guides, I have put on the "Kletterschuhe," but (unlooked-for mischance) there is nothing that they can stick to from the base upwards of the rock-slab, so smooth its surface. By dint of frantic working of knees and

elbows, with finger-tips fixed in the limited and awkward holds. I succeed in making way, though slowly, up this terrible rock-face, and after much hard work, crawling penitent-wise, I get near the guides. Dimai calls out to me: "Zè peso de Kleine Zinne, no zè vero, Signor Sinigaglia?" ("It is worse than the Kleine Zinne, is it not, sir?") I quite agree with him, and with a last long strong pull am up as well.

Cragsmen should arrange to climb this toilsome rock-face—fortunately not a dizzy one, otherwise it would be very bad—without shoes. At any rate, it could easily be avoided (this we discovered afterwards) by attacking the base of the rock more to the left, and mounting directly, as far as a small rock-belt which leads, with a slight divergence to the right, to a little below the summit of our rock-face. But every good climber will look upon it as a duty to attempt it.

This exciting passage accomplished, we diverge a little to the right, and, by an easy rock-shelf, bear over the extreme left-hand spur of the southwestern face, parallel to the southern ridge. Here we rest a moment to take breath. Then following still for some minutes the above-mentioned spur towards the north, we succeed in reaching a sort of little platform, above the spur itself, where we erect, as we had done in other stages of the ascent, a little cairn.

From here we resolutely attack the steep arête



CRISTALLO, FROM CAMPO. (From a photograph by Alots Beer, Klagenfurt.)

that confronts us. We have a splendid escalade by rocks sharply inclined—several bits are vertical or overhanging, but all very short—though safe and affording a good scramble, till we gain, over this same arete, another platform. We see then that from this descends a large belt of strata in a westerly direction as far as the middle couloir which ought to take us to the topmost peak. This easy rock-belt, visible from the base of Cristallo, descends at about two-thirds of the height of the wall, as far as the above-described point of bifurcation of the couloir, cutting diagonally the very steep western face of the mountain to the right of it.

Trending westwards by this rock-belt, in a few minutes we let ourselves down into the middle couloir that we have not thought wise to follow from its base, because half-way up, as far as can be judged, a double and extremely steep wall bars the way.

Then we ascend in a straight line by the couloir, sometimes keeping to the rocks on the right which afford us a lively scramble, at other times pursuing our route by the couloir itself which is not very steep, but it is rather untrustworthy on account of falling stones, as far as a few yards below the point where, bifurcating, it inclines somewhat to the left. Its right-hand branch leads up direct nearly as far as just below the summit, and is all hung with icicles. The other, after a certain

distance, diverges to the left towards a sharp pinnacle half-way up the terminal ridge, more towards the west.

A little above the point of bifurcation, as I have said, a belt of strata-seemingly easy-leads much higher up above the arête on the right, whence turning round over the southern face, one would probably soon reach the ordinary route up Cristallo. But we are anxious to achieve the ascent entirely by the side towards Cortina, and so crossing the couloir from right to left, towards the west, we attack the steep rocks just in front of us. We find the scramble extremely varied and exciting. All at once we are confronted with a fine overhanging bit of rock that Dimai surmounts with rare agility. Then we follow the ascent by small chimneys, narrow cornices, and vertical rock-slabs, till we gain a point where opinions differ as to our further route. Pompanin would like to mount straight in front of us, as far as the snow-ridge. Dimai, on the contrary, maintains that the proper way is more towards the left, and facts seem in his favour. So we follow our Pietro, mindful of his unimpeachable character. Finally, after a short and easy traverse, still towards the west, and after winding along a natural gallery of rock, we emerge with a shout of triumph on the last ridge, and pursuing a short, almost horizontal tract of this, we arrive from the west on the summit of Cristallo, greeted by the joyous shouts of a party ascending by the ordinary route.

It is 12.45. It has, therefore, taken us nearly eight hours and a half from Tre Croci, including about an hour and a half srest. We are delighted with our climb, and Dimai especially, who has guided the ascent splendidly, with the wonderful certainty and intuition which distinguish him, is radiant with satisfaction. Pompanin likewise has borne himself valiantly and deserves the most cordial praise. Who could have believed, when from this same summit of Cristallo, a month ago, we had looked down on the formidable precipice below with respectful awe, that to-day we should have made the whole ascent entirely from the western face?

We halt some little time on the summit. It is misty in nearly every direction, and there is a chilly, damp feeling in the air which threatens rain. At 1.20 we descend, going down quickly enough by the easy southern side. We stop a few minutes to fraternise with the members of the other expedition—two German climbers and a lady, with Seppl Innerkofler and two Cadorine guides—then resume our descent at a break-neck pace, fleeing from the downpour which is imminent.

At 2.40 we are at Tre Croci, having achieved in the space of an hour, exclusive of halts, the fourteen hundred yards which separate it from the summit of Cristallo. It was high time, for a few minutes afterwards the mountain, to vent its royal wrath against those who had violated its last impregnable wall, brought down a violent shower of rain, to the great misfortune of the party we had left behind us.

The ascent of Monte Cristallo, by the new route above described, is certainly one of the finest rockclimbs that can be made in the Cortina d'Ampezzo group. The rock is for the most part good and safe, save in the first stage at the base. Of the middle couloir only a brief portion is climbed, and by managing to do it quickly, one is not exposed to stone-falls. The toughest bit is the first large rockface, that took up a lot of our time, and demands hard work, but, as has been pointed out, whoever likes can avoid it. The greater part of the ascent was achieved by the west-south-west side, and the remainder of it, over the south-west arête. mountain scenery which the ascent offers, especially in the last part, which recalls somewhat the great couloir of the Dreischusterspitze in the Sexten Dolomites, is of the wildest and most picturesque character.

Once the route is well established, without the hesitations and errors inevitable in a first ascent not preceded by any reconnoitring. I believe the summit can be easily gained from Tre Croci in about six hours.¹ If the climber sets out from Cortina, it will be better to make his route by the

¹ The second ascent of Cristallo by this route was achieved in August, 1895, by the well-known Italian mountaineer, Signor F. Gonella, with Z. Pompanin as guide.

little promontory called the "Forca"—which unites the bulk of Cristallo to that of Pomagagnon from which in a short time a direct descent can be made into the terminal amphitheatre.

Let me conclude by warmly recommending my guides, Pietro Dimai and Zaccaria Pompanin, to those climbers who may wish to repeat this splendid ascent.

¹ Zaccaria Pompanin, although very young, has already worthily gained one of the best positions among the Cortina guides. In the summer of 1895, I was able to prove that two years of experience had greatly increased and refined his best qualities as a guide. Especially praiseworthy is his enthusiasm for new and daring undertakings, in the happy issue of which he is always a very valiant and enterprising attendant.

A DAY'S ADVENTURES ON ANTELAO.

TO find adventures on the ancient and time-honoured Antelao, the venerable patriarch of the Dolomite peaks, will appear at first a most unlikely thing, yet such was our experience in an attempt to climb the mountain by the southern side, the only one still remaining impregnable. Of the three routes for its ascent so far discovered, the easiest and most frequented is that by San Vito, the Forcella Piccola, and the northern ridge. This one was followed by Paul Grohmann, who climbed Antelao for the first time on the 18th of September, 1863, with Francesco and Alessandro Lacedelli, and Ossi as guides. From the same side it was ascended in winter by Lieutenant Pietro Paoletti and Herr Issler, in 1882.

Another way particularly interesting to cragsmen, and of which the anything but trifling difficulties vary according to the condition of the ice, was discovered on the 8th of August, 1886, by Captain David Menini, of the *Alpini*, with two soldiers of his company and Guiseppe Pordon, of



ANTELAO, FROM THE SUMMIT OF PELMO. (From a photograph by Signot L. Sinigagita)

A DAY'S ADVENTURES ON ANTELAO. 171

San Vito, as guide. Their route, starting from Tai di Cadore and the source of the brook of Antelao, leads over the fine glacier that binds the eastern flanks of the mountain, by a very steep ice-slope and then by difficult rocks, entirely by the southeastern face. The descent of Antelao has been twice accomplished this way, though no further ascents—as far as is known at least—have been made by it.²

Herr Emil Artmann, with Seppl Innerkofler as guide, explored a third route on the 13th of July, 1892. Making San Vito the starting-point, he attacked the mountain in front by the north-western face, and surmounting the first steep wall of rocks, he gained the north-north-west aréte, by following which he reached the summit without meeting with exceptional difficulties. This route, which from San Vito would appear the most direct, avoiding as it does the tiresome *detour* by the Forcella Piccola, is, on the contrary, rather longer than the latter.³

So far, the southern face of Antelao, that precipitous and imposing wall, furrowed by a wide gully towards Peajo and Vodo di Cadore, had remained inviolate. From this side I had been able to admire it some days before the attempt that is now to be related was made.

^{1 &}quot;Rivista Mensile," 1886, p. 337.

² Ibid., 1888, n. 11, p. 382; 1890, n. 11, p. 400.

^{3 &}quot;Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1892, n. 17.

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In a superficial examination of this side, I had excluded, from my own mind, all idea of climbing it by the above-mentioned gully which looked most unpromising, and was sure to be dangerous by reason of stone-falls. An ascent by the very steep wall to the left of the gully—as seen from Peajo—appeared to offer some probability of success. In case of failure, there would still seem to be a last route possible, that by the great crest on the right which had the appearance of being rather more inviting than the other two routes, and which, as far as one could judge, might be easily gained from the base of the gully by apparently good rocks.

Having thus formed the plan of attack, it was duly communicated to those excellent guides, Pietro Dimai and Zaccaria Pompanin, always enthusiastic for new routes, and on the 15th of September, towards 1,30, we left Cortina under an exceptionally hot sun, taking with us the necessaries for passing the night at the foot of the rocks. Of these necessaries the essential for me was a sheepskin to sleep in. The only skin my companions invested in was their own—good guide's-skin—the best after all!

Whilst the carriage rolled along the great white Cadore road, we gazed admiringly on the beautiful and majestic pyramid of Antelao, all resplendent in the sun. As seen from the valley at Cortina, the mountain has a most lordly aspect. In proportion as you descend towards San Vito,

the charm is dispelled, and its mass loses that grandeur of outline which rendered it, a little before, so imposing.

Passing below Borca, we can see the precipitous spur of rock which is projected from the northnorth-western crest of Antelao, and which shows from here a formidable smooth-faced wall. await with some impatience the opportunity of contemplating at our leisure the southern face, which ought to present itself in its most imposing aspect, according to our calculations, between Vodo and Peajo di Cadore, about half an hour from Borca. The only thing that disquiets us is a motionless cloud, which, whilst all the rest of the sky is perfectly clear, lingers oddly enough on the upper half of the mountain, letting us catch glimpses from time to time, through tantalising rents, of insignificant pieces of it, and thus hindering us from any preparatory study of the route. It would seem as if the mountain had a presentiment of our approaching assault, and was even now preparing its defence.

Towards four o'clock we arrive at Peajo, a poor little hamlet of the village of Vodo, where we had arranged to stop. We alight, and make a great sensation among the inhabitants, who probably had never before assisted at the arrival of such a remarkable-looking individual as myself, accompanied, moreover, by two men strangely dressed, armed with ice-axes, and carrying a sheep-

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skin and other unusual luggage. In fact, the news of our coming quickly spread through the village, and all the population of Peajo, male and female, including the generation under seven, poured on to the open space in front of the modest, cleanly inn where we had alighted, and outside which we stationed ourselves, exposed to the public gaze, the while awaiting the dinner hour. And now, too, a clear sky revealed the top of Antelao, which had hitherto been covered with clouds. The rumour going forth that under the traveller's disguise was a royal prince who had lately been gaining a name as a cragsman, I was soon surrounded by signs of profound respect.

Our plans were quickly known, and a host of questioning and doubting faces were at once turned towards the mountain face we meant to scale. The oldest among them shook their heads, saying that no one had ever reached that smooth level bit of rock, the inaccessible "Pian dei Lenzoi," a little more than half-way up the side of the mountain, nor would any one ever reach it. They related with gusto the deception practised by a Cadorino who sold this very "Pian dei Lenzoi" to some poor man, passing it off as a plot of exceptionally fertile ground. The disappointment of the dupe when he came to visit his Peajo estate must be left to the imagination.

But what filled the measure of their admiration was a musical recital on the old neglected spinet at the inn; and when after dinner, at seven o'clock, our little caravan departed by the mysterious light of a lantern for the mountain obscurity, a crowd (a crowd for Peajo) gathered at the door and sped us on our upward way with songs and good wishes. We took a youth from the village as porter (who suddenly became a mark for the envy of many fellow villagers). He was to carry back the sheepskin and help us to find the way in the gloom of night through tracts entirely unknown to us.

Having taken the little road which leads to the village of Vinigo, romantically situated on a small saddle, and having mounted by the same for a few minutes, we left it on the right, and began to climb towards the north by a small well-marked footpath which ascends by steep grassy slopes in front of Peajo.

Our intention was to sleep up at the highest possible point. Hence we marched on quickly till we gained the forest, at the top of which, if possible, we wanted to pass the night, gaining in this way for the morrow two good hours of toilsome climbing. We had already remarked at Peajo that from the edge of the forest, by crossing a steep slope of scanty pasture, we should soon reach the foot of the rocks.

It was a lovely, warm, starlit night. We slowly ascended the wooded steep, passing scattered and deserted shepherds' huts. The silence was broken only by the last echoes of melancholy snatches of

song which rose from the valley, and from time to time by the whirring of some bird, scared by our footsteps, which left its warm nest in the darkness to seek a distant refuge. As we climbed, a wonderful sense of peace and well-being seemed to pervade the stillness around us. In such moments the ideas (to quote the words of Vittorio Sella) "are lost in a delicious atmosphere," and are connected only by a slender web, vaporous and intangible as the shifting clouds which, in the warm night, linger on the misty crests of the distant peaks.

Having at last arrived at the border of the forest. and found a small bit of level ground surrounded by thick pine-trees. Dimai pronounced his hic mane, bimus optime, and we made ready for our bivouac. Several branches of pine-wood soon fell to the ground under the stout blows of my companions, and a bright and cheering blaze quickly crackled, and sent up myriads of sparks and cast a weird glamour over our encampment.

If the necessity of sleeping on a mountain over 10,000 feet high, in a contracted space, in contact with bare rock, and but badly protected against the cold and even against hunger, is anything but a pleasant experience, quite delicious, on the contrary, is the passing of a night in the Dolomites, after exercising due foresight and preparation, at an elevation generally between 6,000 and 10,000 feet, with a warm night, a good sheepskin sack, and a blazing fire of rhododendrons. All these conditions are improved



ANTELAO, FROM ZUÈL.
(From a photograph by Alois Beer, Klagenfurt.)

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by a cup of hot tea, which you can soon make with your little apparatus, and to which some biscuits may form a fairly good addition. Wrapped in my sheepskin, I passed a delightful night, partly asleep and partly dreaming with open eyes, by the side of the fire among the pines. Above me was the starstrewn vault, and all around the silence of the summer night.

At 4.30 Dimai sounded the réveil, and we were soon astir. Leaving behind us all impedimenta that our youthful porter could take back to San Vito (where we reckoned to arrive about dinner-time), we set out, though our carrier, most curious as to our expedition, was anxious to follow us as far as the foot of the rocks. Emerging from the forest, we made for the steep grassy slope directly in front of us, and climbing up a sharply inclined gully by an indifferent path, we were very soon at its summit. Then we were able to examine at leisure "the spirit of the way," or as Dante would say, del cammin la mente.

The southern side of Antelao is displayed from here in all its magnificence. A vast gully, of which the higher part is hidden, cuts the imposing mountain face throughout its full height. To the left of this gully the precipice rises in an absolute wall of rock, to all appearance nearly impracticable, which we examine with many misgivings. From the "Pian dei Lenzoi," which is at the top of the wall, we know that the passage to the summit, in-

visible from here, cannot be very difficult, but the question is, how to get there.

The ardour of the daring Dimai is somewhat damped by this stubborn fact. He who responded to the doubts of the Peajo natives with a bold, vouthful assurance, is now rather bewildered. any rate, we make up our minds to try. If the attempt fail, then, following out our plan, we shall cut through the gully and bear over to the great arête on the right, which itself should guide us to the summit. The position of the latter is a matter of discussion between the guides. Pompanin, with reason, maintains it was more to the west, and just above the large ridge on the left. As to the gully itself, it is unanimously declared out of the question, on account of the stone-falls to which for several hours we must be assuredly exposed, with the additional aggravation of the weather, which for some days has been exceptionally warm.

Our plans thus laid, crossing a little to the right from the top of the ledge, then going straight down, we descend into a landing space full of detritus (quite easily visible from Peajo), where the large southern gully becomes extinct. After a few minutes' climb we are at the foot of a ledge of rocks, apparently easy, at the head of which our wall rises, appallingly steep, overhanging here and there, and furrowed by very small fissures. The difference in the aspect of this wall as seen from here and as viewed with a telescope from

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Peajo, whence it seems much less lofty and precipitous, is remarkable.

With scanty hope of success, we dismiss our porter, and then climb this first rock-step, paying great attention to it, on account of its untrustworthy state. By diverging somewhat to the west, we reach the top of it, and are on a kind of small saddle, commanding our great ridge which from here is visible in all its terrific grandeur. A short examination convinces us that from this side there is no question of making an attempt. We dare not pronounce the word "impossible," but it would be only by a perfect tour de force that this wall could be surmounted. Its passage appears so difficult and dangerous that it would be madness for us to try. "Piero no no ghe va!" ("Pietro does not go there, not he!") cries Dimai to the enterprising Pompanin, who would like to do a first stage of it by himself, but, having essayed it, listens to the suggestions of prudence, and desists.

We study the possibility of extricating ourselves from the difficulty by the belt of strata that cuts the western slope of the great ridge on the left. The belt, however, is broken in more than one point of the very steep wall of bad rock that it furrows. To turn to the right is out of the question. We are compelled to redescend, looking enviously up at the variegated *Bergsteiger*, the little bird that frequents the high rocks, and soars gaily up the fearful

precipice, resting from time to time on some small projection.

What are we to do? There is nothing for it but patience. We go down the rock-step again, very annoyed at having thus lost time in the pursuit of a forlorn hope.

Arriving once more at the base of the gully, we cross it diagonally till we reach its opposite side. From here, to take us over the great ridge on the right, we have the choice of two devices, the more interesting of which, and perhaps the more difficult, consists in climbing up a portion of the gully, then bending to the right by a steep couloir, here and there festooned with ice, which leads to the south ridge; the other consists in reaching a much lower point in this ridge by climbing a long and apparently not difficult couloir immediately on our right. We choose the latter for greater safety.

An easy traverse from the north-west to the south-east on a rocky ledge covered with detritus, takes us into the couloir. This affords an easy scramble, short and uninteresting, by rocks that are anything but good. At ten o'clock, much quicker than we had calculated, we reach the crest, on a kind of col, from which one looks, on the west side, towards the afore-mentioned great gully of Antelao; on the other, on to a secondary arid valley, which joins the more distant one of Oten. The view is hence rather insignificant. We stay here for half an hour. Before us rises the ridge which ought to

lead us to victory, but we can only see a piece of it. All at once we observe that towards the east ascends a gently-inclined rock-slope, to all appearances perfectly easy, over which we resolve by common consent to coast along the indented ridge, and thus notably save our time. We then trend northwards, and mount straight up this slope, over which we advance rapidly, keeping now more, now less, under the ridge by rocky terraces, so easy that, pursuing the climb thus with so little difficulty, I begin to doubt if we are indeed the first to adopt the route. The guides, however, assure me that we are. If so, so much the better.

We continue the somewhat monotonous climb under a burning sun. There is not a drop of water over these arid rocks. We have, it is true, brought some excellent sparkling Asti, but we have sworn not to tap the bottle till success has crowned our efforts. We accordingly resist all temptation. We climb thus for two long hours over the side of the mountain. Then we leave our ridge (which ends, making an angle to the east at two spires difficult to surmount), and diverge a little to the northnorth-east.

We cross the two spurs, which descend to a valley forming two couloirs, the second and steeper of which, full of hard ice, is overstrewn with stones. Parched with thirst, we cannot help imbibing a little of the icy-cold water which flows abundantly from a rock at the ice level, and Dimai undertakes

the delicate task of securing a provision of it for future use, under the dangerous volleys of stones which rebound capriciously around us from a great height above. Then he has to cut steps, always keeping an eye on the top of the couloir to avoid the threatening bombardment. We ourselves have to cross the couloir, which is fortunately very short, in great haste.

Having traversed it and remounted the opposite side, we shortly come to a small col at the foot of a sharp arête, which rises in a west-north-west direction as far as our ridge, and which, according to the reckoning of the guides, must lead directly to the summit. From the other side of the arête, in front of the small col towards the north, extends a large rocky gully, and behind this another arête, beyond which, still separated by a last gully, the extremity of the Val d'Oten must open out, with the eastern glacier of Antelao, whence Captain Menini made his ascent.

We halt a little while at this point (time 1.10), then, spurred on by the length of the way we have still to go, we resume the ascent, attacking the arête in front. This affords an exciting scramble, up steep but safe rocks, which compensates us for the toilsome stage between this and the col. The hope of being near our goal lends us wings. In twenty minutes we reach the principal ridge, at the point where it makes a distinct curve towards the west in the direction of the summit. We thus reach the

top of an ice-couloir, which is the second to the right of the great southern gully—looking at it from the base. From here we go with caution along untrustworthy rocks, down by a small spire, then we cross a ticklish razor-backed bit of the ridge that falls on both sides in precipitous walls, having to dismount from it by an enormous mass of rock, that seems on the point of falling and affords but scanty hand-holds.

Having surmounted this interesting bit, we round another spire on the northern flank by smooth, unsafe rock-slabs, overrun by water, which want care, and this last obstacle overcome. Dimai raises the pæan. Before us rises a glorious peak, crowned with an ample cornice of snow. We calculate that half an hour's easy climbing separates us from our goal which must be immediately behind the peak. We climb vigorously by the rocks of the last wall, are at the cornice, coast along it by an easy ledge, are quickly at the top, and then we see at a great distance the majestically beautiful summit of Antelao, separated from our peak by no less than two enormous, inaccessible precipices!

We had made a gigantic mistake, a colossal blunder. We were scarcely at the first of the large neighbouring spires of the ridge which are easily visible from the base of the great southern gully. Our peak was divided from the second spire by means of the first ice-couloir which we had seen from below to the right of the great gully which, in its turn, separates the second spire from the summit. Both descent and ascent by the two clefts were alike clearly impossible. To round the two ramparts of rock on the northern side appeared to be an undertaking which, even if at all practicable, must be lengthy and difficult, and for which we certainly had not time. Moreover, as we had promised to return to Cortina the same evening, I could not think of ordering a stay for the night on the rocks to try the route on the morrow.

There remained nothing to do but empty our bottle of wine, and try thereby to drown the grief of our disappointment. Before doing so we made the remote echoes of Antelao resound with fairly violent imprecations. Exhausting in this way alike our protests and provisions, we agreed to descend without delay. We had arrived there at 2.20, and it was now 3, 30.

Either through desire to gain a small victory, or not to have to tread again the long road we had already traversed, I proposed to the guides—and they welcomed the idea—to try the descent direct from the arête to the north-cast of ours (that is, over the underlying glacier which closes Antelao to the east. By crossing the ice we reckoned to get on to the Forcella Piccola (Little Fork), and from there to reach San Vito much sooner than could be done by the other route, which involved, as this did, the long detour by Peajo and Borca.

CORTINA, WITH FALORIA, SORAPIS, AND ANTELAO. (From a photograph by G Ghedina, Contina)

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Leaving then on our right the short wall of rock followed in the ascent, we descend to the left by a parallel arête for about fifty yards, then we bear more to the left into another secondary couloir, of which the northern arête looks on the glacier. Finding no favourable point to make our descent over this, we go down a good part of the couloir which half way down becomes larger and declines, not very steeply, to the valley. Having arrived at about 500 feet from the base of the couloir, Dimai goes before us to reconnoitre, to see if we can get out on the plateau, and if, from here, bending to the north, we can climb up to the glacier to cross it. A great vertical precipice, however, blocks the way.

Then, always behind Dimai, full of confidence in him, knowing him to be a man of keen scent and good at getting out of difficulties, we go along a steep short couloir to the left, which has its origin in the last abandoned arête, a little below where we left it to take to our couloir. We cut through the couloir, descend a bit of the arête, and, to our intense satisfaction, find ourselves on a well-marked saddle on the arête, just touched on the north by the glacier (here a little inclined and affording a fair prospect of descent). Towards the south-southeast falls a steep, though short and easy gully, whence there is a safe descent on the underlying plateau towards Val di Cadore.

The view from this saddle—which ought to have a name—is contracted, but strikingly pictu-

resque. We look at the hour. It is 5.10, that is to say, much later than suits our plans.

Prudence counsels us to abandon all idea of descending by the glacier, which already from here seems full of crevasses, and threatens to make us lose more time than we expected. Besides, we should be running the risk of being overtaken by darkness in a region entirely unknown to my guides, whilst in half an hour of easy walking from the other side our goal may be reached. But the descent by the ice looks so tempting that it is impossible to resist, and at 5.20, all being roped, we begin. Dimai leads the way. Keeping near to a rocky spur on the left, he sets vigorously to work, and cuts large steps in the clear hard ice. This makes our progress much slower than we had anticipated. After about a hundred steps we get down from the extreme tongue of the rocky spur, making for a first crevasse, which we cross with caution over a slender bridge of snow.

Having passed the crevasse, we halt a minute to admire the beautiful mountain scenery which this so little-known side of Antelao affords, with its precipitous eastern sides furrowed by very steep tracks of ice-avalanches, and with a magnificent glacier, this year full of crevasses and quite free from snow, falling to the valley in a cascade of ice. In the gloaming it is a wonderful scene, but we have something else to do than to stand looking at it. We are perforce in a labyrinth of crevasses of different

sizes, and for the most part very long, from which it is absolutely necessary to extricate ourselves with interminable windings before the night falls, and already the first stars are appearing in the heavens.

Thanks to the strategy of Dimai, after much zig-zagging across the crevasses we finally succeed, by directing our way a little towards the east, in getting off the glacier, and gaining a spur of rock which bounds the eastern extremity of it for a short distance. From here we can prove that the glacier descends to the valley towards the north-east much further than we had thought. It behoves us to find a way down parallel to its line of slope by the rocks that from our ridge descend towards the north in the direction of the Forcella Piccola, which the guides point out to me, half-hidden in a mist that rises slowly from the Val d'Oten.

It was about 7.30 when we began the descent. At first we keep close to the ridge, letting ourselves down by rocks and easy chimneys, which in the scanty light demand caution. At a certain point we find the rocks end in a precipice, so we diverge over detritus and ledges about fifty yards towards the west. A steep chimney comes next, overrun with icy-cold water, and we descend it with caution, not seeing very well where and how it will end. Finally we are confronted with another precipice which effectually stops the way and obliges us to take to the left once more, and this time to traverse a smooth, flat rock-slab, with

scanty finger-holds, which compels us to put on, by the light of the lantern, the "Kletterschuhe," which we have fortunately brought with us. The restricted space forces us to perform the operation on a rock, over which flows the cold water from the glacier. That this is comfortable it may be imagined!

Crawling over the face of the rock, where we go groping, seeking the few hand-holds it admits of, we manage this passage, which, perhaps easy by day, necessitates much attention in the darkness. We trust to find at the end of it the slope of screes that is to put us on the way to the valley and the Forcella Piccola. Instead, contrary to our expectation, we find a tongue of hard ice. We light the lanterns again to cut steps and to see where to set our feet, moving cautiously one by one. Having finished with the ice, we find ourselves on a large stone slope, and flatter ourselves that we must be at the end of our labours. It would indeed be time, for the situation is becoming rather critical, and there is a risk of being obliged to sleep on the spot. Every one knows how dangerous is a descent by the obscure and untrustworthy light of a lantern, over passages of rock which in daytime are quite easy.

But Antelao is not yet satisfied with its revenge. After slabs of rock, we have to cross several ledges towards the west; more screes follow, and there, at the end, two narrow, vertical chimneys, absolutely smooth and hardly as large as a man's body, through which we have to let ourselves down by dint of wriggling with knees and elbows, oddly suspended the while in the air. It is difficult to describe how piquant and grotesque is the descent by these chimneys. However we keep our temper most philosophically, and even find some amusement. A strange figure I must have cut at the foot of the chimney, assisting at the grotesque descent of Pompanin, who was coming down from the top with a lantern round his neck, in the dark narrow cleft, making all sorts of contortions with elbows and knees to find a hold in the smooth sides. All this in the dead of night!

After the two chimneys comes yet another rough stone-slope, and finally, to our intense delight, the pasture land. Dimai, with keen intuition, succeeds, in spite of the mist, in finding the right track, and by a short and not steep ascent, we have the satisfaction of arriving on the Forcella Piccola at 10.30. It was, indeed, high time. We make a halt for ten minutes, and attack our provisions with avidity. For seven long hours we had been incessantly pursuing the descent without eating or drinking, entirely absorbed in our search for the right road, and preoccupied by the continual succession of blunders in which the exploration had involved us.

Now we descend precipitately by the easy footpath which leads to San Vito, and at 11.35 knock at

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the door of the hospitable "Albergo dell'Antelao, eighteen hours after our departure from the bivouac above Peajo. Half an hour after midnight we take a carriage, and towards 2.30 in the morning are back at Cortina, where they were beginning to feel somewhat uneasy on our account.

We have sustained a defeat. But may we not call it an honourable one? And, moreover, we have had an adventurous nocturnal descent by a new route, extremely interesting and somewhat hazardous, which, thanks to the ability and care of the guides, was carried out, strange to say, without the slightest mishap. But it is only for this year that we reckon our project frustrated. If the opportunity arises we mean to attempt the enterprise again with more experience, and without the restriction of a limit of time.¹ However it be, we must allow that Antelao is worth attacking, if not by the route we tried, at least by the south-western side.

¹ True to this promise, the author made another attempt on the 2nd of September, 1895, with Z. Pompanin and A. Zangiacomi as guides, and by a new route, directly, that is, from Borca by the south-western side. But after eight hours of hard climbing, having reached about half-way up the face, they found themselves at a point beyond which it was practically impossible to proceed, and from there they descended by the way they had come.

ANTELAO AND SORAPIS, FROM THE SUMMIT OF MONTE CRISTALLO.

(From a photograph by Signor L. Sinigaglia.)

SORAPIS.

(CARTA R. L G. M., IT., 10,515 FEET; CARTA S. M., AUSTR., 10,591 FEET.)

SORAPIS is one of the most beautiful mountains of the Ampezzo group. Not visible from Cortina, on the east of which it rises, because hidden by the lofty ramparts of the Seletta and the Punta Nera, it is seen in all its imposing mass from Tofana, from Cristallo, or the Drei Zinnen. turreted and crenellated bastions, its slopes so grandly moulded and so noble in form, have a particular fascination for the climber. And if Sorapis has been able up to these last few years to boast of only a relatively small number of ascents (in comparison, for instance, with its neighbouring rival, Antelao), that surely must be due to the scant interest and toilsomeness of the two routes ordinarily followed, viz., that adopted by Grohmann in the first ascent he made (on the 16th of September, 1884, with Francesco Lacedelli and Angelo Dimai as guides) by the Seletta, the Pian della Foppa, and the Forcella del Pian della Foppa, I and that more usual route by Chiapuzza, the Forcella Grande and the south-eastern face. The first-named ascent is made from Cortina in from eight to nine hours. The second, which is easier but also more monotonous, takes from six to seven, with Chiapuzza di Cadore as the starting-point.

A third route had been discovered by Otto and Emil Zsigmondy, with L. Purtscheller, on the 28th of July, 1882. Starting from the lake of Sorapis, they rounded the mountain to the west, then leaving the Cengia del Banco to the right, they climbed as far as the spur which shuts in the greater glacier of Sorapis on the west. From there they reached the Foppa di Mattia, and by a ridge, first over snow and then over rocks, the summit.² But this somewhat difficult and perilous route was unlikely to find favour.

A fourth way was recently discovered by Orazio de Falkner—with Antonio Costantini, of Cortina, for guide—who set out from the Pfalzgau Hut, erected by the Pfalzgau Branch of the Austro-German Alpine Club on the shore of the Lake of Sorapis, for the purpose of facilitating the discovery of a new and short route by the north or north-east face. Having rounded the greater

¹ P. Grohmann, "Wanderungen in den Dolomiten," p. 150, cl sea.

² Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1883, p. 89.

branch of the glacier of Sorapis, he reached by this side—over bad rocks—the summit of the Zurlon. From there by sometimes following, sometimes rounding, over difficult *gendarmes* of rock, the ridge which leads to the highest peak, he gained the latter after nine hours' climbing, having met with serious difficulties in a steep ice-couloir close to the summit.¹

De Falkner himself doubts the practical value of his route; hence the exploration of another, which might afford mountaineering interest combined with safety and brevity, was desirable.

Herr D. Müller, president of the above-mentioned Pfalzgau Branch, and Professor von Waltershausen, with Antonio Dimai, A. Dibona, and Z. Pompanin as guides, happily solved the problem in their ascent by the north-eastern face, on the 15th of September, 1892, starting likewise from the Pfalzgau Hut erected at their initiative. The peak had been already reached over the same route, a few days before, by the guides Pietro Dimai and Z. Pompanin, sent on to reconnoitre. Müller in an excellent article 2 describes the route as highly interesting and devoid of danger. 3 Several other ascents were afterwards achieved by the "Müller

^{1 &}quot;Bollettino del Club Alpino Italiano," 1892, p. 238.

² "Mittheilungen des Deutschen und Oesterreichischen Alpenvereins," 1893, n. 7. See also "Rivista Mensile," 1893, p. 399.

³ This side of the mountain had been judged to be impossible by Grohmann, and the guide Lacedelli.

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route"; of these one was made by Madame Jeanne Imminck, and another by Herr T. Wundt, who gives a brilliant description of it in his splendid book, "Wanderungen in den Ampezzaner Dolomiten."

Wishing to close my Dolomite campaign with the ascent of Sorapis by this route, I started on the evening of the 19th of September, in uncertain weather, for Tre Croci, with Pietro Dimai and Z. Pompanin as guides. The latter I had taken on for the purpose of exploring a new route somewhere midway between De Falkner's and Müller's, an undertaking that the weather did not allow us to attempt.

Furnishing ourselves with provisions at the "Tre Croci Hotel," we set out for the Hut at six o'clock. A footpath, tolerable but subject by the very nature of the ground to frequent destruction, leads, rounding the steep eastern rampart of the Cesta, to the wild and imposing amphitheatre formed by the north-north-eastern wall of Sorapis. At a little narrow point of the footpath, above the bank of the torrent, was placed a wire rope, a practical way of inculcating the principle, "surtout pas trop de zéle." But really the veriest amateur would blush to make use of the aid.

At the turn of this rampart of rock, the footpath diverges abruptly to the west, and all at once there appears the imposing black mass of Sorapis. Seen in the evening in a stormy twilight, whilst scattered clouds floated in the sky in circling crowds, veiling every now and then the diaphanous rising moon, it was something never to be forgotten.

A few minutes more, and we arrive at the pretty, comfortable Hut, built in a picturesque situation at the foot of the precipitous walls of Sorapis, a little above the small ice-bound lake of the same name which is dominated on the south by the dark wall of the Croda Marcora, and on the west by the sharp cone of the Zurlon. An agreeable surprise awaited us at the Hut. It was the presence of some distinguished English mountaineers, Mrs. Main, Mr. H. T. Wood, and Colonel Walker. We passed a pleasant evening, discussing the mountain in hand, and jesting about the wire rope.

On the morrow, at 5.15 a.m., we left the Hut; Mrs. Main, with the guides Imboden and Costantini, direct for Sorapis by the ordinary route; Mr. H. T. Wood and myself, with Mansueto Barbaria as the former's guide, by the Müller route. The weather was clear enough, but not very promising. Leaving the little lake on our right, we climbed in a southerly direction by slopes but thinly covered with grass, then by the moraine, and in half an hour we were at the end of the glacier. From here we had for a moment a wonderful coup d'ail. Striking, indeed, was the contrast between the wild and lofty rocks of the wall above us, with its ridges lightly touched by threatening grey clouds and its dark bulk, relieved

at the summit by brilliant snow. On the opposite side we have another marvellous scene; behind motionless, half-transparent banks of mist that linger like fantastic veils on the lower plane of the Auronzo peaks, the sun, struggling to rise, illuminates with fiery gold the distant spires.

We ascend, working always a little to the left, by the broad right-hand branch of the glacier, which is this year quite bare. Passing beyond the Bergschrunde over a narrow but solid bridge of snow, and bending a little to the right, we gain at last the point for attacking the rocks, not far from a small snowy gully that marks the highest point of the glacier. It is seven o'clock. We wait a quarter of an hour, sheltering ourselves under the projecting rocks from the rain that is coming on, and roping ourselves the while.

The ascent is from the very beginning a most exciting one. There are solid rocks which we surmount, climbing in nearly a straight line, then we clamber up a short chimney, under a little cascade of cold water, and, diverging to the right, gain another chimney, formed like a grotto by a wall of overhanging rock. We traverse it without difficulty. We then trend to the left and climb diagonally in a southerly direction by easy ledges and cornices. A belt of detritus soon takes us on to a large semi-circular terrace, dominated by a fine perpendicular screen of rock. By taking to a small chimney which furrows the latter



SORAPIS (NORTH-EAST FACE).
(From a pholograph by Alexander Canaden). Rologra)

diagonally, and cutting across a vertical bit of the wall with a piquant straddle and with a crawl up the last stage over smooth rock-slabs, we gain another higher terrace, commanded by yet another perpendicular rock-screen.

The absence of snow in the usually assailable point of this rock-screen necessitates our opening a passage more to the left. Mr. Wood, with Dimai and Barbaria, climbs by an untrustworthy cornice of bad rocks. I follow the enterprising Pompanin by a decidedly overhanging rock-step, where the great distance between the scanty finger-holds gives us hard work. From the summit of the screen of rock above mentioned, we zig-zag, bending perceptibly to the south, till we come to another lesser chimney protected by a smooth and projecting crag. This same chimney brings us very near to the last ridge, taking us close to a characteristically sharp rock-needle in the form of a church spire (11 a.m.).

Turning to the right of this needle, we enter a narrow ice-couloir, which we easily surmount by cutting steps. Then we take to the rocks again. They are very steep and give us enough to do, though they are not difficult, till we nearly reach the summit of the arête which looks towards the south. A short deviation to the right carries us on to the mauvais pas of Sorapis, which I was impatiently awaiting, since Dimai had expressed a fear that in the existing bad state of the rocks—

now fully covered with snow—it could not be surmounted. It is a bit of wall about fourteen feet high, perfectly vertical, and nearly smooth, bounded above and below by a narrow ledge. Half way up is its only weak point. There is here a hand-hold, and it gives the key to the passage.

Supporting himself on the shoulders of Barbaria. who has enough to do to keep a firm footing on the slippery slab of rock, the agile Pompanin succeeds in hanging on tight and hauling himself up, not without effort, as far as the higher ledge. the same way first Dimai, then myself, and lastly Mr. Wood, are soon on the top. Finally we assist at the aerial transport of Barbaria, who is joyfully hoisted up on the rope by the robust arms of his comrades. The knapsacks and iceaxes are drawn up in the same manner. stage of the scramble is indeed excellent. Wundt believes it presented a difficulty that no single cragsman could surmount, and declares that here "the climber's artifices are worthless. Rocks such as these are simply impracticable," he says. Doctor Müller defines it as a very difficult bit, though he is less emphatic than Wundt, and limits himself to the remark that without the aid of a second very few could hope to surmount it.1

Ooctor Müller, drawing a comparison between his route up Sorapis and that up the Croda da Lago, says that the difficulty of the two ascents is the same, and that, however, there is not so bad a passage on Sorapis as the well-known traverse on the Croda. For my own part, I cannot help

A few paces along the narrow ledge to the right lead us to the foot of a rounded rock-step, much less steep and not particularly ill-looking. Dimai who, having vanquished the mauvais pas believes the difficulty ended, has now to change his opinion contrary to his expectation. This passage, indeed, is very easy when the rocks are in their normal condition. The rock-step is, as I have said, not very steep, but the higher parts of it are round, hand-holds are scanty, and at present it is all iceglazed. Dimai first tries it without success, then Pompanin, then again Dimai-this time more to the left-with the aid of the two guides. But there is no way of holding on. The brave Pietro, with fingers stiff from cold and the long-continued struggle, is obliged to come down, whilst we stand shivering in the narrow angle of the rock anxiously watching the endeavours of our valiant guides. Finally Pompanin, pushed up by his heels, after furious struggling to obtain a finger-grasp, succeeds in discovering on the glazed surface a slight hold, and drags himself over the upper edge of the rock. From up there, in safety, he throws us the rope, and we all shortly come together again on the narrow ledge above. This bit of rock, not more than ten feet high, exacted about half an hour's work, and by its exceptional conditions caused serious difficulties.

finding this latter much easier than the *mauvais pas* of Sorapis which could only be surmounted with great difficulty by one person alone, however clever, as Müller says.

200 CLIMBING IN THE DOLOMITES.

We are now sure of success. Yet another steep contracted chimney, a little rock-step, then another chimney, and we are at last on the "Vorgipfel" to the north of the highest peak. From the "Vorgipfel" we descend for a few yards on to the saddle—at the top of a steep couloir which falls to the east — and we easily reach the summit at 2.10.

We make a rapid descent by the ordinary way, driven by the rough wind, and the snow which all the way down from the first of the chimneys above has unceasingly fallen on us. The descent from this side is without any difficulty, over easy couloirs, terraces, and cornices, connected by ledges of detritus. The only exciting feature of it is the last, fairly perpendicular chimney, which leads directly on to the wide plateau of screes which hems in this side of Sorapis. Over layers of snow and débris, then by grassy slopes, we are soon down in the solitary Valle di Ruscecco and at the Forcella Grande (7,534 feet), where we make a short halt. A pouring rain, which Mr. Wood's agreeable company goes far to make us forget, falls steadily during the precipitous descent to Chiapuzza, and our hour and a half's walk on the high road back to Cortina. We arrive there at 7.20. quite wet through, but triumphant over our ascent so happily successful, in spite of the unfavourable condition of the mountain and the inclemency of the weather.

Taking it all in all, the ascent of Sorapis, under normal conditions, is a splendid and not by any means dangerous scramble, over rocks nearly always good, and of which only a single passage, the mauvais pas, can be called difficult. We were not troubled by stone-falls. From the Hut to the summit, under ordinary circumstances, five hours should suffice. The descent to Cortina by the usual way takes about the same time. For this ascent our three guides can be cordially recommended, who are excellent in themselves and who thoroughly understand the Müller route, which they have studied and traversed several times. Insignificant variations have been made in this route, especially in the first and middle part of it, but probably the Müller route itself will always be found the most direct.

CONCLUSION.

FEW words in conclusion.1 I have more than once heard surprise expressed that cragsmen could go and spend their time in such distant fields as the Dolomites, among peaks hardly more than ten thousand feet high, of mere rock, with short ascents, and so forth, whilst close at hand we have great peaks of more than thirteen thousand feet high, with splendid glaciers and magnificent walls of rock affording much greater interest, excitement, and danger to the mountaineer. Setting aside the question of height, the importance of which is very often of secondary consideration, of comparative want of glaciers, for which too, consolation may be found, and of the shortness of the ascents, which on the contrary is often an advantage rather than a drawback, I shall merely say a word as to difficulty and picturesqueness. To those climbers who say: "What impression can such small mountains as the

It must be remembered that the author is here addressing Italian readers.



CORTINA.

Dolomites make upon us, who are accustomed to the Dauphiné, Mont Blanc, the Matterhorn, Monte Rosa, the Oberland peaks and the like?" I recall the words of poor Emil Zsigmondy, who was no mean authority and well understood and judged the difficulties and the pleasures of mountaineering.

Neither the Bernese Oberland, he affirms, nor the environs of Zermatt can advantageously vie with the magic region of the Dolomites. They form, according to him, a genuine training-school. As in all arts the true artist believes he can never know enough, that there he always has something to learn, so with the climber of the Dolomites. They are a test of any man's powers and technical knowledge. "With what varying degrees of difficulty and with what necessary efforts," exclaims Zsigmondy, "can lofty points of view here be gained, and how quickly does the joy of a success so toilsomely acquired compensate the climber for his labours, when he has vanquished a steep, smooth rock-fortress, like the Kleine Zinne, for instance!"

I would beg all those of my mountaineering colleagues who are not acquainted with it, to read Zsigmondy's wonderful work—and if they have already done so, to read it again—and then will come to them the longing that came to me, to explore the enchanted world of the Dolomites. I would have them visit these mountains—hitherto so neglected by Italian climbers, that several of the

Italian sides of these splendid peaks remain still unknown to many-and they will see that Zsigmondy's book contains no exaggeration. them make Cortina the starting-point of their excursions, and they will find a climbing-centre delightfully situated, villagers distinguished by an exceptional and proverbial kindliness, and a body of guides, jealous custodians of the traditions of Lacedelli, Siorpaes, and Innerkofler-men of the heroic age of mountaineering-guides, skilful and prudent, tried experts of the rocks, courteous and serviceable in the highest degree. make the ascents of the Dolomites of Ampezzo. Cadore, and Sexten-not to go outside the ground covered in these reminiscences-and they will find nearly everywhere mere rock, it is true, but such a variety of architecture, both from a picturesque and from a mountaineering point of view, that they will be always confronted by something new and delightful and the impression of novelty will be continually there, even when climbing only different peaks of the same group.

They will return from them with fairy visions glowing in their minds—visions of magnificent valleys rich with lofty, aged pines, of deep emerald-green lakes, of white villages with stately campaniles and shining roof-tops, of the distant clear Dolomite spires in a thousand shapes, with bold pinnacles, indented crests, irregular towers, needles, and precipitous walls, all of the strangest form and colour,

outlined on the transparent sky of Tyrol. It will likely be seen that they will defer their enterprises on bigger mountains to a later, and perhaps even indefinite, epoch, for the "little Dolomites" will have assumed a greatness of their own. They will put the climber on his mettle and offer him ever new problems, in steep, often appallingly steep walls, aerial crests, strange chimneys and dizzy traverses that need serious, intense, and energetic application to overcome. He will have here more genuine and unclouded enjoyment in wrestling with difficulties that on the higher mountains need far more toil and give often far less pleasure.

For my own part, I confess, I went to the Dolomites rather a sceptic. But I did not return one. I came back an enthusiast. And when, after a two months' stay, I quitted charming and hospitable Cortina d'Ampezzo, and left behind me the noble portals of Antelao and Pelmo, which shut out that magic district from the traveller's gaze, I felt a genuine pang of regret, for then more than ever did I feel how true and how powerful was the fascination which emanates from these most precious mountains, with scenery inferior to none, with beauty superb and unique—the enchanting Dolomites!

THE END.

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